State of New Hampshire

Influenza Pandemic Public Health Preparedness & Response Plan

Reviewed and Updated: 02 March 2006.

TABLE OF CONTENTS

V. Appendices

NH Communicable Disease Epidemic Control Committee

Christine Adamski, RN
DHHS Communicable Disease Surveillance

Christine Bean, PhD
DHHS Public Health Laboratories

Kathy Bizarro
NH Hospital Association

Lynda Caine, RN, MPH, CIC
Elliot Hospital

Lisa Carlson, MD, MPH
Manchester Health Department

Elizabeth Clark, MD
Infectious Disease Associates

Steven Crawford, VMD
State Veterinarian

Rich DiPentima, RN MPH
Manchester Health Department

Paul Etkind, DrPH, MPH
Nashua Health Department

Margaret Franckhauser, ARNP
Community Health and Hospice Program

Robert Gougelet, MD
Dartmouth-Hitchcock Medical Center

Jennifer Harper
Bureau of Emergency Management (BEM)
Department of Safety (DOS)

Kathryn Kirkland, MD
Dartmouth-Hitchcock Medical Center

Jane Manning, MPH
DHHS Communicable Disease Control

Emmanuel Mdurvwa, PhD
DHHS Public Health Laboratories

Curtis Metzger, BSW, M.Div
Bureau of Emergency Management (BEM)
Department of Safety (DOS)

Jose T. Montero, MD MPH
DHHS State Epidemiologist

James Noble, MD
Concord Hospital

Rachel Plotinsky, MD
Epidemic Intelligence Service Officer

Sue Prentiss
Bureau of EMS

Jody Schweitzer, MPH
DHHS Communicable Disease Control

Jason Stull, VMD, MPVM
DHHS Communicable Disease Control

Elizabeth A. Talbot, MD
DHHS Deputy State Epidemiologist

Daniel Tullo, MS SM (ASCP)
DHHS Public Health Laboratories

Diane Viger, BSN, RNC, CPHQ, CIC
NH Hospital

Margaret Walsh, RN
DHHS Communicable Disease Control

Nicola Whitley, MS
DHHS Public Information Office

Bill Wood
Bureau of EMS

Plan Point of Contact*:*

Elizabeth A. Talbot, MD
DHHS Deputy State Epidemiologist

Telephone Contact List

Organization	Telephone number
Berlin Health Department	(603) 752-1272
CDC Emergency Response	(770) 488-7100
DHHS Communicable Disease Control Section	(603) 271-4496 or 1-800-271-5300 ext 4496
DHHS Communicable Disease Surveillance Section	(603) 271-0279
DHHS Director, Division of Public Health Services	(603) 271-4501
DHHS Health Officer Liaison	(603) 271-4781
DHHS Public Health Laboratories	(603) 271-4661
DHHS Public Information Office	(603) 271-4822
DHHS State Epidemiologist	(603) 271-4476
DHHS State Medical Director	(603) 271-8560
Manchester Health Department	(603) 624-6466
Nashua Public Health and Community Services	(603) 589-4560
NH Bureau of Emergency Management	(603) 271-2231 or 1-800-852-3792
NH Division of Fire Standards & Training and Emergency Medical Services	(603) 271-4568
NH Hospital Association	(603) 225-0900
NH Medical Society	(603) 224-1909

Abbreviations Used in This Document

ACIP	Advisory Committee on Immunization Practices
AHEDD	Automated Hospital Emergency Department Data
BEM	DOS Bureau of Emergency Management
BSL	Biosafety Level
BT	Bioterrorism
CDCS	DHHS, Communicable Disease Control Section
CDSS	DHHS, Communicable Disease Surveillance Section
CDC	U.S. Centers for Disease Control and Prevention
CDECC	NH Communicable Disease Epidemic Control Committee
CHC	Community Health Center
DBHRT	Disaster Behavioral Health Response Team
DHHS	NH Department of Health and Human Services
DOS	NH Department of Safety
DPHS	DHHS, Division of Public Health Services
ED	Emergency Department
EIS	Epidemic Intelligence Service
EOC	Emergency Operation Center
EOP	Emergency Operation Plan
ERI	Epidemic Respiratory Infection
ESF	Emergency Support Function
FSTEMS	Fire Standards & Training and Emergency Medical Services
HAN	Health Alert Network
HCW	Health care worker
U.S. HHS	U.S. Department of Health and Human Services
HRSA	U.S. HHS Health Resources and Services Administration
HSDMS	DHHS, Health Statistics & Data Management Section
ICS	Incident Command Structure
ICD	International Classification of Disease
ILI	Influenza-like illness
IP	DHHS Immunization Program
MMWR	Morbidity & Mortality Weekly Report
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NH	New Hampshire
NHHA	New Hampshire Hospital Association
NIMS	National Incident Management System
NIOSH	National Institute of Occupational Safety & Health
OTC	Over-the-Counter
PCP	Primary Care Physician
PEP	Post-exposure Prophylaxis
PH EPRP	Public Health Emergency Preparedness and Response Plan
PHLIS	Public Health Laboratory Information System
PHL	DHHS, Public Health Laboratories
PHN	Public Health Nurse
PHP	Public Health Professional
PIO	DHHS, Public Information Office
POL	Physician's Office Laboratory
PPE	Personal protective equipment
RODS	Real Time Outbreak Disease Surveillance
RSA	Revised Statutes Annotated
SARS	Severe Acute Respiratory Syndrome

SNS	Strategic National Stockpile
UCS	Unified Command Structure
U.S.	United States
VACMAN	CDC's Vaccine Management System
VAERS	Vaccine Adverse Events Reporting System
WHO	World Health Organization

1. BACKGROUND

Influenza is a highly infectious viral illness that causes yearly epidemics reported since at least the early 1500s. An increase in mortality, typically occurring during each epidemic year, is caused by influenza and pneumonia, and/or by exacerbations in underlying cardiopulmonary or other chronic diseases. In the U.S., influenza causes up to 36,000 deaths each year, primarily among the elderly. The virus is transmitted in most cases by droplets, but it can also be transmitted by direct contact. Maximum communicability occurs from one to two days from exposure to onset of symptoms to four to five days after symptom onset. The incubation period is usually two days, but can vary from one to five days. Typical symptoms include abrupt onset of fever (101°F to 102°F), chills, myalgia, sore throat, and nonproductive cough, and may also include runny nose, headache, substernal chest burning, eye pain, or sensitivity to light. Gastro-intestinal symptoms, such as abdominal pain, nausea and vomiting, may also occur and are more commonly seen in children than adults. An annual influenza vaccination is the best method of protection against influenza. Other measures, such as frequent hand washing and the institution of public health measures for universal respiratory hygiene and cough etiquette, will help stop the spread of influenza in communities as well as in health care facilities.

Two influenza virus types, A and B, are known to cause illness in humans. Influenza type A has further subtypes, determined by the surface antigens hemagglutinin (H) and neuraminidase (N), which undergo periodic changes. A minor change in these antigens (antigenic drift) may result in epidemics, since incomplete protection remains from past exposure to similar viruses. A major change (antigenic shift) may result in a worldwide pandemic if the virus, for which humans have no protection, is efficiently transmitted from human to human.

Influenza viruses are distinctive in their ability to cause sudden, pervasive illness in all age groups on a global scale. Previous pandemics, however, caused disproportionate illness and death in young, previously healthy adults. Also, new data from recent epidemic years show that young children are at increased risk for complications, hospitalizations, and death from influenza. Within the 0- to 4-year-old age group, hospitalization rates are highest among children 0 to 1 years of age and are comparable to rates reported in persons ≥65 years of age. Influenza viruses present biological threats because of a number of factors, including a high degree of transmissibility, the presence of a vast reservoir of novel variants (primarily in aquatic birds), and unusual properties of the viral genome.

1.1. Influenza Pandemic

An influenza pandemic is considered to be a high probability event. Given this potential for rapid virus transmission and evolution, there may be as little as one to six months warning before outbreaks begin in the United States. Outbreaks of influenza would present a unique public health emergency due to the fact that they are expected to occur simultaneously throughout much of the country and in the State, preventing shifts in human and material resources that normally occur in most other natural disasters. The impact of the next pandemic could have devastating effects on the health and well being of New Hampshire citizens. Further predicted complications include a shortage of vaccine and antiviral agents, as well as the increased risk of exposure for health care providers and first responders.

The primary reservoir for human influenza infections are other humans, however birds and mammals, such as swine, are likely sources of novel subtypes that may lead to the next pandemic. To date, the most threatening of these novel subtype reservoirs is avian. The recent avian influenza A reports are reminders that the potential for efficient person-to-person transmission is approaching. With the increase in global travel, as well as urbanization and overcrowded conditions, global epidemics due to a novel influenza virus are likely to spread rapidly around the world. This plan is intended to be used for any influenza pandemic, regardless of its initial reservoir.

1.2. Avian influenza

Avian influenza strains ("bird" flu) are typically exclusive to infecting birds. However, recently, several subtypes of avian influenza A have been shown to cross the species barrier and infect humans in Asia (1997-present), in Europe (2003), and in North America (2003-2004). The first cases of human infection of avian influenza A (H5N1) were identified in 1997 in Hong Kong. The virus infected 18 persons and caused 6 deaths. Genetic studies subsequently linked the outbreak in humans to an outbreak of highly pathogenic avian influenza in poultry. The immediate culling of approximately 1.5 million poultry in Hong Kong is thought to have averted a larger outbreak in humans at that time.

The most recent outbreaks of avian influenza A (H5N1) began in December 2003 in humans in Viet Nam and in poultry in Asia. The World Health Organization (WHO) has reported 122 human cases from mid-December 2003 through November 1, 2005. Sixty-two of those persons have died. These human cases occurred in Viet Nam, Thailand, Cambodia and Indonesia. To date, there has not been efficient person-to-person transmission of the virus, although limited person-to-person transmission has been reported. Beginning in late July 2005, official reports indicated that poultry outbreaks of influenza A (H5N1) have spread beyond their initial focus in Southeast Asian countries, and have expanded to Russia and Kazakhstan. In October 2005, that expansion spread further to Turkey and Romania, where deaths of domestic birds were reported to be from influenza A, and later confirmed by laboratory tests to be of the virus subtype H5N1.

1.3. WHO Pandemic Phases

The response to an influenza pandemic will be based on the *State of New Hampshire Public Health Emergency Preparedness and Response Plan* [*(PH EPRP)* currently in draft form], and therefore, will require a similar infrastructure to what is used in other emergencies, such as bioterrorist events. However, in the event of a pandemic there are specifics in surveillance, vaccine delivery, administration of antivirals, and communications that will need distinctive consideration. These considerations are addressed in Section III. Operations Plans, and they are particular to each phase of the pandemic. The pandemic phases described in this document are those that have been established by the World Health Organization. The WHO has recently revised the pandemic phases; the most recent classifications are outlined in Table 1, which can also be found in the WHO's 2005 *Global Influenza Preparedness Plan*.

1.4. Epidemic Respiratory Infection (ERI) Phases

In addition to the WHO pandemic phases, this plan also lists the corresponding ERI phases, which are based on the *Readiness Plan for Epidemic Respiratory Infection* (ERI) developed by the Dartmouth Hitchcock Medical Center (DHMC) Readiness Committee. The ERI plan establishes an alert matrix that outlines specific response activities to take place in a hospital setting at the various threat levels posed by an ERI, including an influenza pandemic. The ERI plan is currently being adopted by hospitals throughout the State. It may be modified to meet the needs of specific institutions. The Department of Health and Human Services (DHHS) encourages communities to be aware of the ERI alert matrix system, as many of their local hospitals may implement it in the event of an influenza pandemic. The matrix is outlined in Table 2.

Table 1. WHO Pandemic Phases

Interpandemic period
Phase 1. No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk[a] of human infection or disease is considered to be low.
Phase 2. No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk[a] of human disease.
Pandemic alert period
Phase 3. Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.
Phase 4. Small cluster(s) with limited human- to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.[b]
Phase 5. Larger cluster(s) but human-to- human spread still localized, suggesting the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).[b]
Pandemic period
Phase 6. Pandemic phase: increased and sustained transmission in general population.[b]
Postpandemic period
Return to phase interpandemic period.

[a] The distinction between *phase 1* and *phase 2* is based on the risk of human infection or disease resulting from circulating strains in animals. The distinction would be based on various factors and their relative importance according to current scientific knowledge. Factors may include: pathogenicity in animals and humans; occurrence in domesticated animals and livestock or only in wildlife; whether the virus is enzootic or epizootic, geographically localized or widespread; other information from the viral genome; and/or other scientific information.

[b] The distinction between *phase 3*, *phase 4* and *phase 5* is based on an assessment of the risk of a pandemic. Various factors and their relative importance according to current scientific knowledge may be considered. Factors may include: rate of transmission; geographical location and spread; severity of illness; presence of genes from human strains (if derived from an animal strain); other information from the viral genome; and/or other scientific information.

Source: WHO/CDS/CSR/GIP/2005.5: WHO global influenza preparedness plan. World Health Organization, Department of Communicable Disease Surveillance and Response. Global Influenza Programme. 2005.

Table 2. Epidemic Respiratory Infection (ERI) Alert Matrix
Five levels of alert corresponding to the type of transmission and the location of the cases.

What type of transmission is confirmed?	Where are the cases?	Are there cases at the institution?	Alert Level
None or sporadic cases only	Anywhere in the world	No	Ready
Efficient person-to-person transmission	Anywhere outside the US and bordering countries (Canada, Mexico)	No	Green
Efficient person-to-person transmission	In the US, Canada, or Mexico	No	Yellow
Efficient person-to-person transmission	In NH or bordering states; at facility	Doesn't matter; efficient transmission from known sources	Orange
Efficient person-to-person transmission	At facility	Yes, with efficient transmission, sources not clear	Red

2. PURPOSE

This plan is adapted from the *State of New Hampshire Interim Influenza Epidemiologic and Surveillance Pandemic Plan* released in 2004. The purpose of this plan is to describe the specific action to be taken by the Division of Public Health Services in the event of an influenza pandemic. This plan should be implemented in accordance with the *State of NH Public Health Emergency Preparedness & Response Plan (PH EPRP)*. This document should also be used to advise health care workers, health care facility administrators, state and local health department officials, and community officials in their response to an influenza pandemic.

3. SCOPE

This plan encompasses the various aspects of preparedness, emergency response, and the recovery and maintenance efforts to take place in the event of an influenza pandemic.

4. AUTHORITY

4.1. Federal Authority

The Department of Health and Human Services (U.S. HHS) is the U.S. Government's lead agency for the preparation, planning, and response to pandemic influenza. As such, U.S. HHS will coordinate the U.S. Government's response to the public health and medical requirements of pandemic influenza. The U.S. HHS Secretary's Command Center will serve as the national incident command center for all health and medical preparedness, response, and recovery activities. On November 2, 2005 HHS released its *Pandemic Influenza Plan*, which can be found at http://www.hhs.gov/pandemicflu/plan/. This plan will follow those recommendations set forth in the federal plan.

As the component of U.S. HHS responsible for disease prevention and control, the Centers for Disease Control and Prevention (CDC) will have primary responsibility for tracking pandemic influenza and managing the operational aspects of the public health response. To this end, CDC will augment local and state resources for disease surveillance, epidemiologic response, diagnostic laboratory services and reagents, education and communication, and disease containment and control. As a pandemic unfolds,

updated CDC guidelines and recommendations will be found on the CDC website http://www.cdc.gov/flu/ .

The CDC has assumed primary responsibility for a number of key elements of the national plan, including:

- Vaccine research and development
- Coordinating national and international surveillance
- Assessing and potentially enhancing the coordination of vaccine and antiviral capacity, and coordinating public-sector procurement
- Assessing the need for and scope of a suitable liability program for vaccine manufacturers and persons administering the vaccine
- Developing a national "clearinghouse" for vaccine availability information, vaccine distribution, and redistribution
- Developing a vaccine adverse events reporting system (VAERS) at the national level
- Developing a national information database/exchange/clearinghouse on the Internet

4.2. State Authority

The State of NH has designated DHHS to oversee the influenza pandemic planning process in cooperation with local health agencies and other partners. DHHS will convene necessary experts as needed to review this plan and give technical advice. During a pandemic, DHHS will have primary responsibility for:

- Making recommendations to local health departments, health care providers and facilities, and the general public to aid in controlling the spread of influenza
- Maintaining surveillance systems to monitor the spread of disease
- Keeping the public informed

Applicable laws that may need to be taken into consideration during a pandemic are summarized in the *PH EPRP*.

4.3. Local Authority

Each community in the State, including those without existing health departments, should consider developing an influenza pandemic preparedness and response plan, and may use this document as a template. It may be practical and feasible for towns to form partnerships to collaborate in the planning effort, following the model of the Public Health Network. Each city and town in the State has a local Health Officer; his/her roles and responsibilities are outlined in the *PH EPRP*. In the event of a pandemic, these roles will become more specific to influenza, however all responsibilities should be reviewed by the Health Officer as a preparedness activity.

4.4. Legal Preparedness

Legal preparedness is an essential component of pandemic influenza preparedness and response. While no provision of law addresses pandemic influenza specifically, numerous statutory provisions authorize relevant actions.

The State of NH is following recommendations for legal preparedness from the CDC and the Association of State and Territorial Health Officers (*State Health Official Checklist: Are You and Your State Ready for Pandemic Influenza?*). DHHS legal counsel confirms that:

- NH's laws and procedures on quarantine, isolation, closing premises, and suspending public meetings have been reviewed and can be implemented to help control an influenza pandemic.

- For some persons (e.g., those providing essential community services), influenza vaccination may be required; for others, vaccination may be recommended (see RSA 21-P: 49, V & VI relative to public health emergencies).

Additional legal preparedness issues relevant to public health emergencies, including pandemic influenza, are addressed in the *PH EPRP*.

5. PANDEMIC INFLUENZA PLANNING TEAM

The first New Hampshire influenza pandemic preparedness plan was completed in 2001 and was modeled on the CDC guidance, *Pandemic Influenza: Planning Guide for State and Local Officials*, Version 2.1, January 1999. The New Hampshire Department of Health and Human Services' (DHHS) Communicable Disease Surveillance and Immunization Program staff developed this first plan with guidance from the Executive Committee that periodically reviewed and commented on the plan as it was being developed. Since New Hampshire's first pandemic plan was developed, bioterrorism preparedness activities have considerably changed the public health landscape. As a result, many details of the original influenza pandemic planning guidance are subsumed under other preparedness activities. An example of this, called for by the CDC's Bioterrorism Preparedness and Response cooperative agreement, is the development of effective communications systems to ensure connectivity among public health departments, health care organizations, public officials, and others.

The CDC's 2004 draft pandemic plan guidance steered revisions made to New Hampshire's pandemic preparedness plan, which in 2004 became the *State of New Hampshire Interim Influenza Epidemiologic and Surveillance Pandemic Plan*. Also, because of similarities in purpose, scope, and response, the *State of New Hampshire Interim Severe Acute Respiratory Syndrome (SARS) Epidemic Preparedness Plan*, Version January 7, 2004, was used as a model for influenza pandemic preparedness and response. Both plans were reviewed by the NH Communicable Disease Epidemic Control Committee (CDECC), which consists of representatives from the two local health departments, physicians specializing in infectious diseases and epidemiology, representatives from the NH Department of Safety's (DOS) Bureau of Emergency Management (BEM) and Division of Fire Standards & Training and Emergency Medical Services (FSTEMS), the State and Deputy State Epidemiologists, other officials from DHHS, and partners such as the NH Hospital Association (NHHA). This current plan will be reviewed by CDECC prior to release, and then periodically for revisions as deemed appropriate.

In addition to the above-mentioned history, this document was adapted from plans and templates written by various states. We appreciate and acknowledge the work of our colleagues from the following states in particular: Massachusetts, Wisconsin, Florida, and Connecticut.

6. COMMUNITY PROFILE

Past pandemics' illness and death data as well as recent predictions indicate that influenza, while affecting individuals of every age, may more significantly affect certain aged populations. For this reason, it is important to assess NH's age demographic. The US Census Bureau's 2004 census information for the State of NH is summarized in Table 3.

Table 3. NH Age Demographic: 2004

Age Group (years)	2004 US Census Bureau Estimate
0-4	73,981
5-17	231,172
18-64	811,752
≥65	145,065

Typically, hospitalization rates due to influenza are highest among children 0 to 1 years of age and in persons ≥65 years of age. Using this age group data with statewide hospital data, the estimated maximum morbidity and mortality during an influenza pandemic can be calculated using CDC's FluSurge1.0 software (see Table 4). It is important to note that these numbers serve only as estimates of potential total impact, and they are not indications of how or when individuals will become ill.

Table 4. Estimated impact of an influenza pandemic, nationwide and in New Hampshire

	United States[a]		New Hampshire
	Moderate (1958/68-based)	Severe (1918-based)	Most Likely Scenario[b]
Hospitalizations	865,000	9,900,000	4,280
Deaths	209,000	1,903,000	828

[a] U.S. Numbers extrapolated from past pandemics in the U.S. Source: HHS Pandemic Influenza Plan, http://www.hhs.gov/pandemicflu/plan/pdf/part1.pdf , accessed 3 Nov 2005

[b] Most Likely Scenario calculated using a 25% attack rate with an 8-week duration of pandemic. Estimates are calculated using NH's age demographic data, available staffed hospital beds, staffed ICU beds, and number of ventilators. Bed and ventilator data includes information from each NH hospital/ventilator resource. 62.47% of staffed ICU beds are med/surge beds, 19.30% cardiac, 16.09% neonatal, and 2.14% pediatric. 2.81% of ventilators are portable, 4.56% are pediatric, and 0.70% are neonatal.

SECTION II. SITUATIONS AND ASSUMPTIONS

1. SITUATIONS

An influenza pandemic is inevitable, and when it reaches the United States, it will undoubtedly put the citizens of New Hampshire at risk. The goal of NH's Division of Public Health Services (DPHS) in the event of such a pandemic is to minimize the impact of adverse events on the State's population.

2. ASSUMPTIONS

The development of the current plan is based on the following assumptions:

- A novel influenza virus strain will likely emerge in a country other than the United States, but could emerge first in the United States and possibly in New Hampshire.
- The federal government will assume the responsibility of influenza vaccine research, development, and procurement.
- It is highly likely that moderate or severe shortages of vaccine will exist early in the course of the pandemic and also possible that no vaccine will be available.
- The supply of antiviral medications used for prevention and treatment of influenza will be limited.
- With the emergence of a novel influenza virus strain, it is likely that all persons will need two doses of vaccine to achieve optimal antibody response.
- The federal government has limited resources allocated for State and local plan implementation, and therefore the State will provide supplementary resources in the event of a pandemic, which may include the redirection of personnel and monetary resources from other programs.
- The federal government has assumed the responsibility for developing materials and guidelines, including basic communication materials for the general public on influenza, influenza vaccine, antiviral agents, and other relevant topics in various languages; information and guidelines for health care providers; and training modules. Until these materials are developed, the State has the responsibility to develop such materials for its citizens.
- In the event of an influenza pandemic the State will have minimal resources available for on-site local assistance, and therefore local authorities will be responsible for community-specific pandemic response plans, including the modification of this document so that it is community-specific.
- Emergency response, including maintenance of critical services and surge capacity issues, is addressed in the CDC and HRSA cooperative agreements, and will be included in the State Emergency Operations Plan (EOP) Emergency Support Function 8 (ESF-8), and should not be duplicated in the pandemic planning process.

SECTION III. OPERATIONS PLANS

1. PREPAREDNESS PHASE

WHO Phase:	ERI Alert Matrix Phase:
Interpandemic Period *Phase 1:* No new influenza virus subtypes detected in humans. An influenza virus subtype known to cause human infection may be present in animals, but risk to humans is low. *Phase 2:* Circulating animal influenza virus subtype poses substantial risk of human disease.	**Ready** None or sporadic cases only anywhere in the world, but no cases at the local facility.
Pandemic Alert Period - *if in country other than United States* *Phase 3:* Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact. *Phase 4:* Small cluster(s) with limited human-to-human transmission but spread is highly localized. *Phase 5*: Large cluster(s) but human-to-human spread still localized; the virus is becoming increasingly better adapted to humans, but perhaps not yet fully transmissible.	**Green** Efficient person-to-person transmission has been reported somewhere outside of the US and its bordering countries, but no cases at the local facility.

1.1. Vulnerability Assessment and Mitigation

If a surge of influenza cases overwhelms existing health care capacity, or if home isolation is not feasible for certain individual patients, then alternate facilities in the community may need to be used for isolating influenza cases and/or for quarantine of their asymptomatic contacts. In preparing for a public health emergency such as an influenza pandemic, it is the responsibility of the Bureau of Emergency Management (BEM), in conjunction with DHHS to perform a vulnerability assessment of the State. BEM is currently developing an assessment tool for those issues specific to public health emergencies, which will be included in the *State Hazard Mitigation Plan*. This tool may change as new methodologies are released by CDC. Local emergency management personnel should also complete vulnerability assessments and mitigation activities specific to their communities, and may consult BEM for guidance. These activities should be completed annually. The assessment should address those issues pertinent to a pandemic, specifically hospital surge capacity, the availability and use of existing structures for isolation and/or quarantine, the management of patients lodged in these facilities, and resources for securing supplies to isolated and quarantined individuals.

1.2. Surveillance

Surveillance for influenza requires global and national monitoring for both virus and disease activity. Influenza viruses are constantly changing and knowledge of which viruses are circulating is needed to make decisions about the annual influenza vaccine. Disease surveillance is necessary to track the impact of circulating viruses on the human population. The objectives of influenza surveillance are to determine when, where, and which influenza viruses are circulating; to determine the intensity and impact of influenza activity; and to detect the emergence of novel influenza viruses and unusual or severe outbreaks of influenza. Surveillance efforts, particularly in Asia and surrounding countries, have increased dramatically since the emergence of avian influenza A(H5N1).

In the U.S., the Centers for Disease Control and Prevention (CDC) uses seven systems for influenza surveillance, including the following four that operate year-round: 1) collaborating laboratories of the World Health Organization and the National Respiratory and Enteric Virus Surveillance System report

the number, types, and subtypes of influenza viruses detected; 2) approximately 2,250 sentinel health care providers report patient visits for influenza-like illness (ILI), and approximately 500 sentinels continue reporting through the summer months; 3) 122 U.S. cities report mortality attributed to influenza and pneumonia each week; 4) a national surveillance system records pediatric deaths associated with laboratory-confirmed influenza.

In NH, influenza is not a reportable disease, but surveillance systems in place during the pandemic preparedness phase help determine the extent of illness and current circulating influenza virus subtypes. The systems are modeled after components of the national influenza surveillance system and consist of:

1. *Virologic surveillance*: The NH Public Health Laboratories (PHL) isolates and subtypes influenza viruses year round and transmits these data electronically to CDC via the Public Health Laboratory Information System (PHLIS). Unusual specimens are sent to the CDC for further antigenic characterization. Influenza testing is provided to health care providers free of charge if they are participants in the sentinel provider system (see below).

2. *U.S. Influenza Sentinel Provider Surveillance System participation*: Approximately 25 volunteer NH health care providers (specializing in family practice, internal medicine, pediatric, student health or emergency medicine) report the number of patient visits for ILI by age group, and the total number of patient visits, each week during the influenza season (beginning of October through mid-May). Approximately 10 sentinel providers continue to report weekly during the summer months to contribute to establishing a baseline for ILI activity in the summer months and to help detect any unusual influenza virus subtypes.

3. *Pneumonia and influenza-related deaths*: All death certificates recorded by NH's Bureau of Vital Statistics are recorded electronically. The cause of death provides a key tool for tracking influenza and pneumonia deaths, in addition to other categories of disease. The same method used by CDC to calculate influenza and pneumonia death rates as reported in *MMWR* is used for NH death data so that NH mortality rates can be compared to national mortality rates.

4. *Estimated influenza activity*: Overall influenza activity in the State, reported weekly to CDC, is based on reports of ILI, increased fever or respiratory rates reported through the emergency department syndromic surveillance system, and reports of confirmed influenza.

During a pandemic, surveillance will be increased. Current systems will be enhanced and new systems put into place. Efforts are currently being made by both the CDC and the NH DHHS to develop a database that will be used to track individual cases at the start of the influenza pandemic. As the pandemic unfolds, and individual case investigation is no longer feasible, aggregate numbers only will be collected and reported.

1.2.a. Additional Surveillance Systems

In addition to influenza surveillance described above, other surveillance systems, either current or in development, are useful for assessing morbidity in the State and are an important component of pandemic preparedness. These include:

- Emergency Department Syndromic Surveillance: Fifteen hospital emergency departments in the State report daily numbers of patients seen with specific syndromes (fever, rash, respiratory and gastrointestinal). This information is augmented by data gathered by the CDC in their Biosense program specifically to monitor syndromes (based upon the CDC's 11 syndrome definitions) reported to the Veterans Administration and Department of Defense within New Hampshire. In addition, an Automated Hospital Emergency Department Data (AHEDD) program, which automatically collects real-time Emergency Department (ED) electronic data from hospitals using both chief complaint and diagnosis codes (ICD-9 codes)

is in development. Influenza Like Illness (ILI) will be added as a syndrome in the AHEDD surveillance system, based on relevant ICD-9 codes.

- Over-the-Counter Pharmaceutical Surveillance: This is done through a NH system that reports pharmaceutical sales from a major chain within the state. This is augmented by OTC data as collected through the RODS hosted by the University of Pittsburgh.

- School Surveillance (currently only in the city of Manchester): Collects data on school nurse visits from all 22 schools within the Manchester School District and aggregates this information into syndromes.

- Occupational Health Surveillance: Two businesses regularly report daily syndromic surveillance numbers.

- Trauma and Emergency Medical Services Information System (TEMSIS): This on-line surveillance system, currently in an early phase of production, collects data from patient care records, as entered after each response by prehospital providers.

These data are assessed daily by CDSS staff, monitored for trends and any increases above baseline activity. The BT Surveillance Specialist follows up on any increase to determine the cause and prompt disease control investigations if appropriate. Further descriptions of NH surveillance systems are outlined in the *PH EPRP*.

1.2.b. Surveillance Preparedness Activities

Health Care Providers and Facilities
Health care providers are responsible for maintaining strict infection control practices in their offices and facilities to help limit the spread of infectious diseases. Consideration should be given for displaying a "Mask Hygiene Poster and Hand Hygiene Poster" in prominent locations in offices or facilities (posters can be found on the DHHS website at http://www.dhhs.nh.gov . Also, "Guidelines for Respiratory Hygiene and Cough Etiquette" should be instituted (see Appendix 2).

Surveillance activities to be undertaken by health care providers and facilities in the preparedness phases of a pandemic include:

- Keep alert for increased ILI in your facility or community and follow DHHS recommendations for the prevention and control of influenza available on the DHHS website at http://www.dhhs.nh.gov
- Consult with public health experts from the CDCS (603-271-4496) to determine whether or not influenza culture specimens for patients with ILI should be sent to the PHL
- Report any cluster or unusual cases of ILI to the CDCS (603-271-4496, or after hours to 1-800-852-3345 ext. 5300)
- Educate staff in the different methods of influenza testing available; information can be obtained from the PHL (603-271-4660) or from the CDC website at http://www.cdc.gov/flu/professionals/labdiagnosis.htm
- Early in a respiratory outbreak, and if the cause is not known, consider performing rapid influenza testing on naso-pharyngeal swab or nasal-wash specimens from patients with recent onset of symptoms of ILI; report results to CDCS.

State Agencies

The Communicable Disease Control Section (CDCS) Public Health Professionals (PHPs), Public Health Nurses (PHNs) and Epidemiologists, play an important role in ongoing preparedness planning. The CDCS staff, in coordination with the DHHS Public Information Office (PIO), routinely provide recommendations to health care facilities, health care providers, and the general public regarding the prevention and control of influenza. In the beginning stages of a pandemic, CDCS staff will be responsible for case and contact investigations. Annual review of their pandemic influenza response protocols will ensure that the protocols remain current.

In all phases of the pandemic, surveillance systems will be maintained and monitored by Communicable Disease Surveillance Section (CDSS) staff. Activities during preparedness phases include the following:

- CDSS Chief ensures that all program staff are knowledgeable about their roles and responsibilities described in the EOP–ESF-8 that pertain to surveillance activities in the event that the EOP is activated (see State of NH EOP for ESF-8 activities) by including this in routine job duties
- CDSS will maintain existing surveillance systems; CDSS BT Surveillance Specialist will monitor pneumonia and influenza death records received electronically each week from the NH Bureau of Vital Records
- The CDSS Influenza Surveillance Coordinator will recruit and enroll additional sentinel providers, if necessary, to maintain the minimum of one regularly reporting provider for every 250,000 persons (minimum of 10 in states with smaller populations, such as NH)
- CDSS Influenza Surveillance Coordinator will monitor ILI data by accessing the secure CDC sentinel provider website at least weekly for data accuracy and completeness; sentinel providers will be contacted by phone or email as needed
- CDSS Influenza Surveillance Coordinator will monitor ILI data to ensure that at least the minimum number (10) of sentinel providers are reporting weekly to the CDC via the Internet year round
- CDSS Influenza Surveillance Coordinator, in coordination with PHL, will send guidelines to sentinel providers regarding specimen collection from patients with ILI and submission of specimens to PHL
- CDSS Influenza Surveillance Coordinator will provide feedback and maintain contact with sentinel providers at least weekly to encourage reporting, follow-up on unusual reports, and encourage testing of the patients as appropriate; if influenza has been identified in the area, lab testing will likely not be recommended
- CDCS Public Health Professionals will investigate reported ILI outbreaks in facilities as they are reported
- The CDSS Chief will assess the overall influenza activity level in the State (widespread, regional, local, sporadic, or no activity) and report to the CDC by noon each Tuesday
- CDSS will collaborate with the Health Statistics and Data Management Section's (HSDMS) Program Specialist on the AHEDD pilot project in an effort to enhance disease-based surveillance
- DHHS will monitor and revise recommendations from the CDC for any additional surveillance activities that should be undertaken
- CDSS will provide data management support for all DHHS-initiated vaccination campaigns

The Public Health Laboratories (PHL) play an integral role in influenza surveillance. PHL activities during preparedness phases include the following:

- PHL will perform influenza testing, type/subtype influenza culture isolates, and send unusual isolates to the CDC for further antigenic characterization
- PHL will transmit influenza data (positives and negatives) to the CDC electronically via PHLIS each week
- PHL will provide influenza testing free of charge to participants in the U.S Influenza Sentinel Provider Surveillance System
- PHL will provide influenza testing free of charge to health care providers in facilities such as hospitals, long-term care facilities, or schools reporting outbreaks of ILI or unusual cases of ILI
- PHL will develop a contingency plan for laboratory surge capacity. This plan will ensure that there are sufficient staff trained for influenza testing as well as staff cross-trained for continued laboratory operations.
- PHL will establish agreement(s) with appropriate private laboratory(ies) in the State to assist with testing
- PHL will maintain Biosafety Level (BSL) 3 laboratory conditions
- PHL will subtype all influenza A viruses identified in submitted clinical specimens and immediately report to the CDC any that cannot be subtyped
- PHL will maintain reagents from the CDC (when they become available) to detect and identify the novel strain
- PHL will institute plans for handling substantially more influenza specimens than usual, including the development of a database for tracking specimen subtypes

1.3 Epidemiologic Preparedness

1.3.a. Capacity for Epidemiologic Investigation

The New Hampshire Department of Public Health Services currently has the capacity of 10 Public Health Nurses (PHNs), 3 Epidemiologists, 1 Zoonotic Disease Veterinarian, 1 Epidemic Intelligence Service (EIS) Officer, 1 Program Specialist, and 1 Food Safety Coordinator via the Communicable Disease Control and Surveillance sections to perform the functions outlined in the *PH EPRP* pertaining to epidemiologic investigations. In the event of an influenza pandemic, these functions will be defined more specifically to influenza and respiratory epidemiologic investigations.

1.3.b. Protocols and Standard Operating Procedures

Disease specific protocols and standard operating procedures for investigation of influenza cases are the responsibility of the Communicable Disease Control and Surveillance Sections. This document will outline such protocols. Case investigation protocols will be maintained by and located in the CDCS office at 29 Hazen Drive in Concord, NH. Those documents released to the public will be posted on the DHHS website at http://www.dhhs.nh.gov

1.4. Laboratory Capacity

The PHL will be the primary laboratory providing support to the CDCS, and will be responsible for providing diagnostic technical expertise and specimen collection and handling information in disease investigations. Results of laboratory tests will be promptly shared with the ordering physician and the CDCS.

The PHL is equipped with a Bio-Safety Level 3 laboratory. In the preparedness phases of a pandemic, PHL will accept and test specimens free of charge from the sentinel sites. Beyond the preparedness phase, PHL will perform testing based on recommendations from CDCS.

Clinicians should follow PHL guidelines for specimen collection, packaging and delivery. These guidelines will be posted on the DHHS website for influenza. Information on influenza testing, including proper specimen collection, handling, shipping, transport and submission procedures, can be obtained on this website or by calling the PHL at (603) 271-4660.

The PHL currently has the capacity to test specimens for influenza and subtypes by molecular techniques. Ongoing collaboration with reference laboratories continues in an effort to establish exchange of testing and/or personnel in the event of a pandemic. PHL will continue to cross-train staff to assist in testing during surge events. Laboratory surge capacity preparation includes specimen receipt, processing, isolation, typing, and reporting.

1.5. Risk Communication and Public Education

The purpose of public education and risk communication is to ensure a timely, accurate and continual flow of information to the public and the media about a public health emergency. Communications with the public and the media will be in keeping with the principles of Crisis and Emergency Risk Communication (CERC) whenever possible in order to keep the public informed and enable them to make informed decisions.

When a crisis occurs in New Hampshire that is health related, such as an influenza pandemic, the DHHS public information office will be notified by the Division of Public Health Services (DPHS). When notification occurs, the Public Information Office (PIO) will prepare press releases, set up press conferences, provide fact sheets, prepare information for the DHHS web site, answer media calls and arrange interviews, write and design materials such as posters and brochures as appropriate. The Public Information Office will also arrange tapings, broadcasts, town meetings, and radio and television broadcasts proactively as needed and possible.

If the State Emergency Operations Center is activated, PIO will be in contact with the PIO for the Bureau of Emergency Management, providing support as needed. If the DHHS Incident Command Center (ICC) is activated, the Public Information Office will have a representative there, as stated under the incident command structure. PIO will provide materials, consultation, and assistance as requested. A PIO representative will also be in consultation with DPHS through their ICC if it is activated or other means such as meetings as appropriate.

Press releases will be drafted by the Public Information Office in consultation with the appropriate subject matter expert at DPHS, and final approval will be given by the Commissioner of DHHS or his designee. The Governor's office may also be involved with vetting press releases, or alternatively his communications people may write them. With a large emergency, the Governor's office may choose to be the lead on communications issues.

In the case of pandemic influenza, because the incident may be national, the federal government may become involved. The level of involvement will depend on the incident but could include FBI presence, CDC assistance at DPHS or in the Public Information Office, or Department of Homeland Security involvement.

If the Joint Information Center (JIC) is activated, PIO will play an active role in coordinating the media at the JIC. The JIC is the responsibility of the Bureau of Emergency Management, but in the event of pandemic influenza, where the emergency is of a health nature, DHHS PIO will work with BEM to handle the media.

The Public Information Office will also be a resource for health officers, town officials, hospital PIOs, and other local officials as needed. DHHS PIO may coordinate with other state PIOs and possibly request assistance from them if the incident warrants.

The Public Information Office will work in concert with the DHHS Minority Health Office to help address issues surrounding special populations, such as New Hampshire residents who do not speak English, people with sight or hearing deficiencies, and those with disabilities.

1.6. Staff Training and Education

The Division of Public Health Services staff, especially the Communicable Disease Control and Surveillance staff, will be provided opportunities for skill development training necessary for effective influenza pandemic planning and response. Examples include:

- Mass Antibiotic Dispensing
- National Incident Management Systems (NIMS)
- Incident Command Structure (ICS)
- Emergency Planning
- Conducting Drills and Exercises
- Emergency Operations Center Training
- Risk Communication
- Laboratory Activities (e.g., specimen collection, handling, and transport)
    - Cross-train personnel to address surge capacity
    - Cross-train personnel in molecular testing
- Epidemiology and Public Health Surveillance

In addition, the staff members of the Food Protection Section and other DHHS nurses will be cross-trained by Communicable Disease Control and Surveillance staff to act as a Back Up Team for the CDCS.

1.6.a. Disease Control Back Up Team

It can be anticipated that during a public health emergency, such as an influenza pandemic, the Communicable Disease Control Section (CDCS) will be overwhelmed with an influx of calls and investigations pertaining to that event. Personnel will simultaneously need to maintain their response to non-emergent case investigations and inquiries. In addition, the CDCS staff, as a component of the public, is also susceptible to illness, and as a result, may be unable to work. For these and other reasons, the CDCS will call upon a *Disease Control Back Up Team* as they approach the case investigation threshold (see Section 2.5.f. below). This team will assist with case investigations, staffing hotlines, clinic operations, data entry, and any other pertinent tasks. Also, DPHS has established a contract with the Poison Control Center, which will assist in answering telephone calls from the general public when the number of calls exceeds the Section's capacity.

The CDCS will follow their chain of command to notify the State Epidemiologist when the case investigation threshold is near to being surpassed. At this point, the State Epidemiologist will notify the Back Up Team leaders who will coordinate the deployment of team members. The team's assigned tasks will vary with the phases of the pandemic and should be delegated by the State Epidemiologist. The decision to utilize the Poison Control Center will also be made through the Section's chain of command. Upon approval, the PCC will be notified at 1-800-222-1222.

1.7. Special Needs and Fixed Populations

The Bureau of Emergency Management (BEM) is responsible for identifying and assisting segments of the population that may require special needs or services during a public health emergency. Special needs and fixed populations may include, but are not limited to the following:

- Senior/disabled in housing complexes or independently living in the community
- Residents of group homes and assisted living facilities
- Homeless
- Non-English speaking
- Blind and hearing impaired
- Incarcerated and institutionalized

During an influenza pandemic, these populations may require particular services to ensure the protection of their health. The CDCS may provide guidance and technical assistance to BEM and those officials accountable for the above facilities, but it will be each organization's responsibility to create their own emergency preparedness and response plans. Facilities may use this plan as a template for their documents. In the event of a pandemic, CDCS will advise health care professionals and will respond to clusters or outbreaks in these facilities, as is described in the Case Investigation Section below.

The Department of Health and Human Services, Public Information Office is responsible for providing information on any public health emergency to the general public. Efforts will be made to provide important documents in at least the top five languages spoken after English if appropriate, and more languages if needed.

The Public Information Office will also work with the DHHS Minority Health Office and the Bureau of Emergency Management to help get communications out to persons whenever possible who may not receive them through standard channels, such as the deaf and hard of hearing, people who do not speak English, and the homebound. Such methods may include providing interviews, fact sheets, or posters in other languages, connecting with community partners to help deliver a message, or using nonstandard channels, such as grocery stores or mailings to help reach people.

1.8. Immunization in Preparedness Phase

In the initial phases of a pandemic, there are certain activities that should take place in health care facilities as well as on the State level. Specific guidelines for the immunization priority groups will be determined based on the epidemiology of the disease at the onset of the event, in consultation with CDC. The following is a summary of activities to occur in the preparedness phase. Because these activities will take place in the preparedness phase, the recommendations for vaccination apply to the regular influenza season and to available influenza vaccine, which is a separate activity from vaccination campaigns that may take place during the response phase of a pandemic. It is the intent of the following recommendations to reduce morbidity from seasonal influenza transmission in vital workers if pandemic strain emerges, to reduce diagnostic confusion if a pandemic strain emerges (one may have a higher suspicion for pandemic strain if the patient is known to have been vaccinated against seasonal influenza), and to prepare communities for providing vaccination clinics in the event that vaccination for a pandemic strain is necessary.

1.8.a Activities for Health Care Providers and Facilities

- Ensure that the most recent recommendations and guidelines for administration of influenza and pneumococcal polysaccharide vaccine are on hand
- Encourage all health care workers in office settings with direct patient contact to receive annual influenza vaccination; per SB438, all licensed facilities (hospitals, residential care facilities, adult day care facilities, and assisted living facilities) are required to offer influenza vaccination to their health care workers

- All licensed facilities (hospitals, residential care facilities, adult day care facilities, and assisted living facilities) shall document evidence of immunization of all consenting patients against both influenza and pneumococcal disease in accordance with current ACIP recommendations
- DHHS plans to hire an adult immunization coordinator to support health facilities in implementing these steps
- A 2005 Medicare rule revision will also require nursing home to offer influenza and pneumococcal vaccination to residents.

1.8.b Activities for State Agencies

- The DHHS Immunization Program (IP) will continue to implement annual plans to increase influenza and pneumococcal vaccination coverage in order to increase overall immunity to respiratory disease and reduce the risk of multiple and secondary infections
- IP and BEM will develop a plan for mass vaccination of the general public, to include the following:
    1. Provide technical assistance to community planning teams, local health departments and agencies on planning for mass immunization. The network of volunteer community planning teams that were involved in smallpox in 2003 has been revitalized. This activity has been ongoing, including: planning meetings with community teams, visits to clinic sites, trainings, and development of a clinic manual, the *Mass Prophylaxis Clinic Planning Template: Avian Influenza Annex*.
    2. Develop and maintain a system of communication with all community vaccination sites.
    3. Conduct mass vaccination exercises with volunteer community teams, based on availability of free influenza vaccine provided by the CDC for this purpose, to further develop community teams' abilities.
    4. Assure readiness of vaccination clinic supplies, which may be in high demand nationally and may not be provided by the CDC in push packs
    5. Coordinate with bordering states (VT, ME, MA) and with Canada in collaboration with federal authorities in vaccination plan development
- IP and BEM will identify essential services groups, those necessary to keep the state's essential infrastructure operational (e.g. fire, utilities, post) and those necessary to respond to the pandemic (e.g. hospital, EMS), and establish a means to contact each, either by direct or indirect points of contact, to provide them with instructions on receiving immunizations in emergent situations
- IP will ensure that contingency plans have been considered for emergency distribution of unlicensed vaccines using emergency investigational new drug (IND) provisions, including inventory control, record keeping, and completion of a signed consent form. It is expected that CDC will provide the protocol and sample IND forms
- IP will develop a plan for investigation, to be led by IP's medical epidemiologist, of adverse events using the existing VAERS reporting system; consider identifying pre-existing networks of neurologists that could serve as sentinels for serious adverse events such as Guillain-Barré Syndrome.
- IP will search for and then utilize the best available system to track vaccine supply, distribution, and use; an example of such a system is CDC's Vaccine Management (VACMAN) System
- IP will consider CDC's recommendation to develop a recall-reminder system to track administration of both vaccine doses and conduct recall for second doses. The CDC is developing a tracking system for aggregate data collection in pandemic.

- IP will compare their faxblast database of vaccine providers to the Health Alert Network's (HAN) database of providers to identify any gaps or additions needed for information flow about vaccine in the pandemic context
- DHHS Legal Counsel, NH Department of Safety (DOS) Legal Counsel, and the State Epidemiologist will ensure that appropriate legal authorities are in place that will allow for implementation of major elements of this plan
- IP will review and modify vaccination plans as needed, and at least annually
- CDCS and IP will meet with partners and stakeholders to review and update major elements of the vaccination plan

2. RESPONSE (EMERGENCY) PHASE

WHO Phase:	ERI Alert Matrix Phase:
Pandemic Alert Period – if in the U.S. *Phase 3:* Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact. *Phase 4:* Small cluster(s) with limited human-to-human transmission but spread is highly localized. *Phase 5*: Large cluster(s) but human-to-human spread still localized; the virus is becoming increasingly better adapted to humans, but perhaps not yet fully transmissible.	**Yellow** Efficient person-to-person transmission in the US, Canada or Mexico, but no cases at the local facility. **Orange** Efficient person-to-person transmission in the region (NH/VT/MA or close to borders) and perhaps cases at the local facility. Nosocomial transmission from known sources only.
Pandemic Period *Phase* 6: Pandemic phase: increased and sustained transmission in general population.	**Red** Efficient person-to-person transmission with cases at the local facility and nosocomial transmission without clearly identified sources.

2.1. Command and Control

The sustained, coordinated efforts required to control pandemic influenza lend themselves to the principles and structure of incident command and management systems. In the event of a pandemic, the Incident Command System (ICS) described in the *PH EPRP* will be utilized. To establish this command for a statewide response, the Bureau of Emergency Management (BEM) should be contacted as soon ICS is initiated. The BEM will then activate the NH Emergency Operations Plan (EOP). The EOP provides an all-hazards approach to disaster response and recovery and outlines the roles and responsibilities of organizations and State agencies that would likely be involved in an emergency situation. At the heart of the EOP are 16 Emergency Support Functions (ESFs). One or more of these ESFs might be activated in the event of an influenza pandemic. Each ESF is headed by one primary agency, with one or more support agencies assigned to the ESF to help with operations. DHHS is the primary agency for ESF-8, Health and Medical Services, and plays a support role in seven other ESFs. The State Emergency Operations Plan can be found on the Internet at http://www.nhoem.state.nh.us/Planning/contents.shtm .

When applicable, the DHHS Commissioner will recommend that BEM activate the State of NH Emergency Operations Center (EOC), which will coordinate the incident response, utilizing the NH EOP described above. In the case of an influenza pandemic, the Department of Health and Human Services (DHHS) will act as the lead State agency, which may place the State Epidemiologist in the position of incident commander. Overall, during an influenza pandemic, the goal will be to reduce influenza-related morbidity and mortality and keep social disruption and economic loss at a minimum. To meet this goal, we need to maximize the use of limited resources, monitor the status of the outbreak, collect and organize situational information, manage staffing needs and requirements, monitor/supply persons in isolation and quarantine, maintain an inventory of respirators and other personal protective equipment (PPE), track the status of/procure essential supplies, operate special/temporary facilities, and manage administrative and financial aspects of the response.

2.2. Communication

In an emergency situation, including an influenza pandemic, accurate, consistent and timely messages are key in notifying and educating the public, as well as notifying and facilitating movement of emergency staff to their assigned duties and stations, and in ensuring that the emergency plan is followed as intended. The Communicable Disease Control and Surveillance Sections have a major role in all aspects of communication involving a public health emergency through the Health Alert Network (HAN), and Public Health Information dissemination mechanisms. The HAN is a statewide information and communication system that links the State health agency with local hospitals, physicians, and the local public health network to alert communities of possible threats, exposures, critically ill patients, or patients needing decontamination. The HAN is a secure electronic exchange of information that will be used during a public health emergency. The Communicable Disease Control and Surveillance Sections will provide expertise in presenting timely and accurate information about the influenza pandemic through the HAN and through the PIO. CDCS and CDSS will follow the communication guidelines set forth in the *PH EPRP*.

During normal influenza epidemic years, the CDC provides a number of materials including: basic communication materials on influenza, vaccine, and antivirals in various languages (mainly English and Spanish); recommendations and guidelines for health care providers; training modules (Web-based, printed, and video); "canned" presentations, slide sets, videos, and documentaries; and symposia on surveillance, treatment, and prophylaxis. CDCS will utilize these materials when establishing their response to health care providers and to the public regarding influenza recommendations.

The following are communication-related issues that pertain to pandemic influenza.

1. Assuring adequate communication systems will be a joint responsibility of federal, state and local public departments
2. Messages will need to be revised as the pandemic unfolds; messages from CDC will be the template for state and local officials for crafting messages for their constituents
3. Because of anticipated shortages and delays in receiving vaccine and antivirals, messages informing citizens about the rationale for priority groups, as well as measures to be taken until such agents are available, will be critical
4. The public will likely encounter some unreliable and possibly false information in the media and on the Internet, underscoring the need for accurate, consistent and timely communication messages from DHHS/DPHS
5. Mechanisms for communication with the public will vary depending on the phase of the pandemic and its impact on New Hampshire communities and in neighboring states

DHHS/DPHS will continually strive to communicate with all essential partners; keeping all essential partners completely informed throughout the pandemic will be difficult, if not impossible

2.3. Surveillance

Surveillance systems will be enhanced as the pandemic progresses from the preparedness phases to emergency response phases. Efforts are currently being made by both the CDC and the NH DHHS to develop a database that will be used to track individual cases at the start of the influenza pandemic. The previously described preparedness phases surveillance activities will be maintained, and the following additional activities will take place.

2.3.a. Activities for Health Care Providers and Facilities

- Continue activities initiated in previous phases
- Isolate and/or cohort patients with influenza (see Section 2.6., Isolation and Quarantine)
- Refer to the most current CDC and DHHS guidelines; CDC guidance available on the internet at http://www.cdc.gov/flu/ and the DHHS guidance at http://www.dhhs.nh.gov/DHHS

2.3.b. Activities for State Agencies

- CDSS will focus on epidemiological and laboratory data collection to characterize changing trends
- State Epidemiologist will use data to modify policy and/or redirect efforts
- CDCS will collaborate with PHL to triage specimens for testing and to choose which isolates to send to the CDC per the CDC guidelines (http://www.cdc.gov/flu/professionals/labdiagnosis.htm)

As the pandemic unfolds and the CDCS's maximum capacity approaches, individual case investigations will no longer be feasible. Therefore, full case investigations will cease (see Section 2.5.f., Threshold for Ceasing Case Investigations) and aggregate numbers only will be collected and reported.

2.4. Case Investigation

Once the CDCS has reason to believe that a novel strain of influenza is a risk to NH residents, a Health Alert Notification (HAN) will be disseminated to NH providers requesting their vigilance in reporting a normally non-reportable disease. As suspect or confirmed cases are reported, they will be assigned to the on-call Public Health Professional (PHP), a PHN or Epidemiologist, for case investigation. The PHP will utilize the following guidelines in performing the investigation:

2.4.a. Confirmed Case

1. The CDCS staff member receiving the disease report will initiate the Disease Investigation Report Form (See Appendix 3). If during normal business hours (M-F 8-4:30), this form will be given to the PHN Office Coordinator who will then assign the investigation to a PHP.
2. The PHP assigned to the case will call the health care provider to confirm diagnosis, and also request clinical and treatment information. The PHP should confirm case status, using CDC case definitions, if available, or, if the novel strain first appears in NH, using the case definition established by CDCS epidemiologists in conjunction with CDC.
3. The PHP will determine whether the case has been hospitalized, and, if so, will provide the following recommendations to health care providers (NEJM 353;13 29 Sept 2005); recommendations may be altered in order to adhere to the most recent CDC guidelines:
    - Treat patients with enhanced precautions, which includes a combination of standard, contact, droplet, and airborne isolation precautions.
    - If possible, house patients alone in a negative-pressure room, or in a single room with the door closed. If this is not possible, cohort patients in multibed rooms or wards, keeping beds at least 1 meter apart and preferably separated by a physical barrier.
    - Health care workers should use high-efficiency masks (NIOSH-certified N-95 or equivalent), long-sleeved cuffed gowns, face shield or eye goggles, and gloves.
    - Limit the number of health care workers with direct contact with patient and limit access to the patient area. If possible, restrict these health care workers from looking after other patients.
    - Restrict visitors to a minimum and give them proper personal protective equipment with instructions in its use.

    Exposed health care workers should follow the recommendations in Section 2.5.c. regarding post-exposure prophylaxis.

4. The PHP will gather information for contact investigation as described in Section 2.5.b.
5. The PHP should verify laboratory results by requesting a report from the Public Health Laboratories (PHL), if applicable.
6. The PHP will work with other CDCS personnel if necessary to notify all involved partners (ie., health care providers, local Health Officers, the Public Health Network). Records of each notification should be given to the PHP assigned to the case. It will be this PHP's responsibility to compile all notification records and to ensure all partners are notified as soon as possible.

2.4.b. Suspect Case

1. The PHP assigned to the case will call the health care provider to determine a diagnosis and/or the estimated time of arrival for pending lab results. The PHP will obtain a history, requesting clinical and treatment information. If the suspect case has not yet seen a health care provider, the PHP will refer this individual to his or her PCP for evaluation and testing, ensuring that the PCP's office is alerted prior to the arrival of the suspect case in order to take the appropriate infection control measures. If the suspect case does not have a PCP, s/he will be referred by the PHP to a Community Health Center (CHC). A list of CHC's can be found in the Resource Directory Appendix of the *PH EPRP*.
2. If the laboratory samples have yet to be collected, or if results are from a positive Rapid Antigen test performed in a POL, and the patient is deemed high risk (will depend on exposure assessment and case definition), then the PHP will request that any collected sample be forwarded to the Public Health Laboratory (PHL) for confirmation of pandemic influenza.
3. The PHP will determine whether the suspect case has been hospitalized, and will assess whether the suspect case requires additional isolation (see Section 2.6., Isolation and Quarantine). If the suspect case has been hospitalized and is discharged prior to complete resolution of infection, or if never admitted, both the patient and the patient's family should be contacted by the PHP to receive education on personal hygiene and infection-control measures (NEJM 353;13 29 Sept 2005).
4. The PHP will await contact investigation until the suspect case is confirmed. If time to confirmation is estimated to be longer than potential incubation time, contact investigation should begin and information gathered as described in Section 2.5.b.
5. The PHP will work with other CDCS personnel if necessary to notify all involved partners (ie., local Health Officers, the Public Health Network, Infection Control Practitioners). Records of each notification should be given to the PHP assigned to the case. It will be this PHP's responsibility to compile all notification records and to ensure all partners are notified as soon as possible.

2.5. Contact Investigation

2.5.a. Definition of Contact

Contacts are individuals who have had close contact with a case at some point during the duration of illness, which has exposed them to the infectious agent. Influenza is typically thought to transmit from human to human by respiratory droplets. However, in the case of avian influenza there is uncertainty regarding the exact routes of transmission, and therefore, individuals are to be considered having been exposed by direct contact, respiratory droplets, or even aerosolized virus, and perhaps by indirect (fomite) contact with self-inoculation (NEJM). Any individual having been in contact (having spent >15 minutes within 3 feet of the case) with the case during the infectious period, two days before or up to 5 days after the onset of symptoms, is considered a contact needing observation and/or prophylaxis, depending on the extent of the exposure. Because immunocompromised individuals may shed the virus longer, they should be considered infectious for the duration of illness, even when that is greater than 5 days. Exposure should be assessed by the PHP performing the investigation.

2.5.b. Procedure for investigating contacts

The contact investigation should be conducted promptly. Only those contacts having been deemed "exposed" may be eligible for post-exposure prophylaxis (PEP). The PHP will advise exposed household and close contacts as follows:

1. If attending to the case, use appropriate hand hygiene, do not share utensils, avoid face-to-face contact with patients with suspect or confirmed cases, and consider donning high-efficiency masks and eye protection (NEJM). Caregivers should follow the infection control measures outlined in Appendix 4.
2. See Primary Care Provider to address post-exposure prophylaxis (PEP) needs.
3. Monitor their own temperature twice daily and evaluate for symptoms for seven days after their last known exposure.
4. In the event that the contact develops symptoms (fever, cough, shortness of breath, diarrhea, or other systemic symptoms), contacts should receive empirical antiviral treatment and undergo diagnostic testing. Contacts will be advised to see PCP for this course of action. The PHP will ensure that the PCP's office is alerted prior to the arrival of the symptomatic contact in order to take the appropriate infection control measures. If the contact does not have a PCP, s/he will be referred by the PHP to a CHC. A list of CHC's can be found in the Resource Directory Appendix of the *PH EPRP*.
5. Educate contacts. Consider distributing fact sheets.

The PHP will advise health care workers who care for infected patients as follows:

1. Monitor their own temperature twice daily and report any febrile event.
2. If unwell for any reason, exclude from direct contact with patients.
3. In the event that symptoms develop, undergo appropriate diagnostic testing. If there is no alternative cause identified, immediately see PCP for treatment.
4. If potentially exposed to infectious aerosols, secretions, or other body fluids or excretions because of a lapse in aseptic technique, consider PEP.
5. If a high risk exposure has occurred, consider PEP immediately. High risk exposures would include aerosol-generating procedures.

2.5.c. Recommendations for Post-Exposure Prophylaxis

Contacts to both suspect and known cases should be advised by the PHP performing the investigation about the signs and symptoms of influenza. In a limited outbreak, close contacts of cases may be managed through either active or passive monitoring and without any restriction of movement *unless* they develop symptoms of disease. Consideration should be given to quarantine of contacts with high-risk exposures (e.g., health care workers involved in aerosol-generating procedures on an influenza patient) even in the absence of symptoms.

Contacts of influenza cases may be advised to the above precautionary recommendations. Household and close contacts to cases, as well as any health care worker with possible exposure, may be eligible for PEP. Antivirals will be administered in coordination with CDC's recommendations, which may indicate an update to this dosing, and these are to be incorporated in DPHS's *Antiviral Guidance* (draft form pending).

In the event of a large outbreak or high-risk exposure (e.g., exposure of health care personnel during intubation of a patient) quarantine of asymptomatic contacts may be considered as a means of interrupting disease transmission. Quarantine guidelines are outlined below. It will be at the discretion of the State Epidemiologist if contacts to suspect cases should be quarantined. Quarantine guidelines will be discussed with the contact by the PHP prior to or at the initiation of quarantine. When individuals are identified as contacts to suspect cases they should follow recommendations listed above and self-quarantine for one week after the last known exposure, or until the pandemic strain of influenza is ruled out. This will be enforced by local law officers if proof of person-to-person transmission exists.

Due to the potential shortage and questionable efficacy of antivirals for the treatment of pandemic influenza, healthcare providers will be advised on appropriate use by State and Federal recommendations.

2.5.d. Mass Immunization, Prophylaxis and Pharmaceutical Stockpiles

The CDCS will follow the guidelines outlined in the State's *Mass Prophylaxis Clinic Planning Template* for implementing a large-scale prophylaxis response to an influenza pandemic (see *Mass Prophylaxis Clinic Planning Template Annex* in *PH EPRP*). Vaccine and prophylaxis can be requested through the Strategic National Stockpile (SNS). The CDCS will follow the requisition process defined in the *NH Strategic National Stockpile Deployment & Management* document located in the *NH EOP*, *ESF-8* (*Health & Medical Services*), *Annex #1*. The following is a summary of activities involving immunization during the response phase of an influenza pandemic:

2.5.d.i. Activities for Health Care Providers and Facilities

- Continue activities initiated in previous phases

2.5.d.ii. Activities for State Agencies

- The Director of the Division of Public Health Services (DPHS) will ensure that human resources are in place to support community vaccination teams, taking into account the need for additional staff due to illness. Local communities will be responsible for establishing and managing clinic sites, as planned, including clinic staffing. Funds for costs incurred will be requested from the federal government in a declared emergency.
- BEM will coordinate planned activities with bordering jurisdictions
- IP and BEM will alert relevant agencies and partner groups to the emerging situation and ask them to review vaccine delivery protocols and procedures
- DHHS Commissioner will fully activate the immunization plan
- IP will obtain vaccine as it becomes available, using available federal or state funding
- IP will pack vaccines and will coordinate with BEM to arrange for secure delivery to clinic sites
- IP and BEM will coordinate receipt and distribution of clinic supplies. Communities may need to procure supplies initially.
- IP and CDCS will continue to provide technical assistance to community teams, local health departments and agencies implementing immunization clinics
- CDECC will be convened on an emergency basis, as needed to assist with recommendations and policy development
- DHHS Commissioner will recommend the activation of the State Emergency Operations Center (EOC). If the State EOC is not activated, the Commissioner will request the activation of ESF-13, Law Enforcement and Security, under the State EOP to assist in protecting and deploying the vaccine and those who administer it, if it is believed that the supply of vaccine is under threat
- DHHS Commissioner will recommend the activation of the State EOC. If the State EOC is not activated, the Commissioner will request the activation of ESF-6, Mass Care and Shelter, under the State EOP to assist in coordinating efforts to provide care, shelter, and feeding

2.5.e. Specimen Collection and Delivery

According to CDC guidelines, nasopharyngeal and nasal specimens (swab, aspirate, wash) are usually preferred over other samples, such as throat swabs, for diagnostic testing because of higher quantities of detectable virus. Specimens should be collected within the first 4 days of illness. The PHP assigned to the case investigation should refer to the PHL guidelines on specific specimen collection and delivery requirements particular to the pandemic influenza.

To sustain PHL testing capacity in the event of a pandemic, CDCS will institute stringent sample triage to ensure that only samples meeting the clinical case definition are sent to the PHL for testing. This will ensure that testing will continue until the threshold for ceasing case investigation has been reached. This decision to cease investigations, and therefore cease specimen submissions, will be communicated directly from the State Epidemiologist to the Director of the PHL. The PHP will oversee specimen collection and delivery based on triage outcome, and may act as a liaison for initial communications between the PHL and the provider. PHL courier schedules will be available to CDCS to coordinate sample submission.

2.5.f. Threshold for Ceasing Case Investigations

Because influenza is not a reportable disease, case investigations will only be prompted if there is a known pandemic or reason to suspect a pandemic strain of the virus. At that time, case reports will be entered into the surveillance system created by the Communicable Disease Surveillance Section (CDSS) and case investigations will be performed by CDCS. Together, CDCS and CDSS will monitor the number of cases to determine if the quantity and epidemiology resembles a cluster. If a cluster is identified, CDCS will proceed as described in the *PH EPRP*. Should the number of confirmed cases approach epidemic proportions, extensive case investigations will cease and mass prophylaxis, treatment, isolation, and quarantine measures will be implemented as deemed appropriate. Involved PHP's should report any clusters immediately by following the ICS outlined in the *PH EPRP*. This chain of command must be consulted before declaring a ceasing of investigations.

In the event of an influenza pandemic, CDCS activity should be reported on a weekly rather than monthly basis in order to monitor the section's capacity. Beyond the threshold of maximum capacity, the Disease Control Back Up Team will be deployed (see Section 1.6.a.).

Other factors that will be considered in deciding to cease influenza case investigations include the following:

- Epidemiologic profile of the affected community
- Geographic spread of the event
- Number and frequency of cases
- Laboratory capacity
- Need for mass prophylaxis clinics and isolation and/or quarantine measures

Once full case investigations cease, they should be replaced by an enhanced surveillance tracking system, and large-scale response efforts should be initiated.

2.6. Isolation and Quarantine

Isolation measures should be considered when individuals known to be infected with the pandemic strain of influenza pose a threat of transmission to the general public. Quarantine differs from isolation in that it is the physical separation of well individuals believed to have been exposed to pandemic influenza, but are asymptomatic, in order to prevent transmission to the general public. However, for both, the decision should be based on the epidemiological characteristics of the virus. The *PH EPRP* describes the legal issues related to isolation & quarantine. The protocol for issuing an order of isolation or quarantine is also in the *PH EPRP*.

2.6.a. Isolation Guidelines

Influenza cases should be admitted to a health care facility/hospital for the purpose of isolation, especially during early stages of the pandemic, only if their clinical condition warrants, or if isolation in the home or alternate facility cannot be achieved effectively.

If an isolation room is not available for a patient admitted to a health care facility/hospital, the patient should be placed in a room with a patient(s) with suspected or confirmed influenza (cohorting). When a private room is not available and cohorting is not possible, a spatial separation of at least 3 feet should be maintained between the infected patient and other patients or visitors.

Cohorting patients may be difficult to accomplish in many hospitals, and facilities need to develop plans based on their individual resources (personnel, facility design, etc.). The strain of influenza should be considered when cohorting, meaning when possible, individuals with the differing strains should be cohorted separately. The following is CDC's suggested hierarchical approach:

- When possible, place patients with documented or suspected influenza in a private room
- When the number of patients with influenza exceeds the available private rooms, try to place influenza cases together in multi-bed rooms or wards
- When patients with and without influenza must be placed in a room together, try to avoid including uninfected patients most susceptible to influenza complications
- When multiple influenza cases are admitted, minimize the number of staff having contact with infected patients by assigning all influenza patients to a single or small group of health care personnel, who have been vaccinated and/or are taking antiviral medications for prophylaxis (if medications available and appropriate)
- When numerous cases are identified, consider placing all patients with documented or suspected influenza in one designated unit or ward, i.e., an influenza cohort, and assign vaccinated health care personnel to work in the designated influenza cohort unit

It may be preferable for affected individuals to be monitored in their own homes, if certain requirements are met. However, home isolation may not always be feasible. For example, if there is an immunosuppressed person also inhabiting the home, monitoring in an alternate, non-hospital facility may be necessary. An example of an alternate lodging facility may include a motel room, with a separate entrance to the outside/outdoors, a private bathroom, perhaps a small refrigerator and/or microwave, and communication capabilities to the outside (by telephone).

Recommendations for isolating cases, which includes influenza cases, in residential settings (homes) and alternate facilities (ie., motels) are outlined in the *PH EPRP*.

Appropriate personal protective equipment (PPE) to be used when isolating an influenza case include a surgical mask to be worn by the patient during close contact (less than 3 feet) with uninfected persons to prevent the spread of infectious droplets. If an influenza patient is unable to wear a surgical mask, then household members should don a surgical mask when interacting with the patient.

2.6.b. Quarantine Guidelines

Instances in which an individual, small groups, or communities may be quarantined are outlined in the *PH EPRP*. Also outlined are the minimum criteria and guidelines for each type of quarantine, which may include home quarantine, quarantine in designated facilities, and work quarantine.

There are no specific precautions needed for household members of contacts who are in home quarantine, as long as the person under quarantine remains asymptomatic. Household members of quarantined individuals can go to school, work, etc., without restrictions. However, if the contact develops symptoms, then s/he should immediately notify medical/public health authorities to obtain a medical evaluation, and at that point, household members should remain at home. DHHS should be contacted for further instructions.

2.6.c. Community-Based Containment Measures

The decision to institute community containment measures, and the nature and scope of these measures, will be made based upon the extent of the pandemic and the availability of resources. Community-based control measures are designed to reduce the risk of influenza transmission by limiting the potential for social interactions (e.g., canceling public events, implementing community "snow days," etc.) and by implementing broad measures for the public to prevent inadvertent exposures (e.g., fever monitoring in public places, use of masks). Factors that will need to be considered in determining a threshold for community action are outlined in the *PH EPRP*.

In addition to the basic and enhanced activities listed in the *PH EPRP*, DHHS may also recommend in the case of influenza pandemic, monitoring of fever in public places as another activity.

2.7. Security and Crowd Control

Due to the potential for mass immunization, quarantine, and/or isolation efforts in the event of an influenza pandemic, security and crowd control will play an integral part in the efficacy of response activities. If the pandemic is not a declared state of emergency, the security and crowd control will be coordinated with BEM and local police. If it is a declared state of emergency, the security and crowd control will be coordinated by ESF-13 and the National Guard.

2.8. Mass Care

Mass care refers to those actions taken to protect evacuees and other victims from the effects of any emergency. In the case of influenza pandemic, these actions may include providing temporary shelter, food, clothing, and other needs to those displaced from their homes due to the pandemic. Guidelines set forth in the BEM EOP should be followed in the event of an influenza pandemic. The various aspects to consider for mass care are outlined in the *PH EPRP*.

2.9. Mental Health Care

The provision of mental health care is of critical importance, especially in the case of influenza when residents may undergo mass immunization, isolation, and/or quarantine. The Disaster Behavioral Health Response Team (DBHRT) is a resource team specializing in the area of mental health and crisis intervention (see *Behavioral Health Response During Public Health Emergencies Plan*, Annex D of *PH EPRP*). DBHRT is accessed 24 hours a day via the BEM at 271-2231. In mass response activities to influenza, DBHRT will be on-site to manage mental health needs.

2.10. Protection of Public Health Staff and Other First Responders

In the event of an influenza pandemic, both Public Health staff and other first responders will be required to perform disease control and containment activities. Healthcare workers will simultaneously need to perform direct patient care to ill patients. Because the two functions will likely overlap, all CDCS employees and first responders will be trained in precaution methods to limit the likelihood of exposure. First responders' training and equipment will be coordinated by their home agency (ie., fire fighters by the local Fire Department). For the CDCS, training will be the responsibility of the section, and DPHS will provide CDCS staff with or access to the following personal protective equipment (PPE):

- Fit-tested N-95 Masks
- Latex and/or nitrile gloves
- Gowns
- Protective eye shields

First responders' fit-testings should occur for each individual as soon as possible after hire.

The CDCS is currently providing training to police chiefs and field supervisors, state police, correctional facility administrative and medical staff, Superior Court System staff, local emergency planners, fire departments and emergency medical service providers, hospital infection control and legal staff. Training will focus on issues revolving around isolation and quarantine, including not only infection control

measures, but also personal protection. Trainings were held at various locations throughout the State during the month of October 2005.

In the case of pandemic influenza, all of the above personnel and any other individual providing care for suspect or known cases should follow enhanced precautions. Enhanced precautions include standard, contact, droplet, and airborne precautions (see Appendix 4 for precaution guidelines).

2.11. Mass Fatality Management

In the event of an influenza pandemic, mass casualty is certainly a consideration. The BEM will activate the State of NH Emergency Operations Center and will coordinate the management of the mass fatality event. The Office of the Medical Director is responsible for developing a mass fatality management plan.

2.12. Finance and Accounting

Throughout the State's response to an influenza pandemic, it will be critical for DPHS to track any costs incurred. Finance and accounting is a multi-level action with tracking of expenses performed at the state and local level. Without careful accounting and recording of justified costs and expenses, reimbursement is often difficult. The tracking of these expenses should begin at the outset of the pandemic response.

The finance team shall keep the Director of DPHS aware of the authorized budget, log and process transactions, track amounts and secure access to more funding as necessary and feasible. The finance team shall also ensure that all incidents related to personnel time records are accurately maintained for internal staff. The finance team is comprised of two finance administrators for DPHS and one finance administrator for CDCS.

3. RECOVERY PHASE

WHO Phase:	ERI Alert Matrix Phase:
Postpandemic Period Return to interpandemic period.	**Ready** None or sporadic cases only anywhere in the world, but no cases at the local facility.

At this point in the pandemic, staff shortages due to disease, death, staff "burn-out," and other factors will likely be an issue for health care facilities and offices, public health departments, emergency response organizations, and community service providers.

3.1. Continued Surveillance

With confirmation that the pandemic has ended, activities outlined in the Preparedness Phase (Interpandemic period, Phase 1) should be resumed. This plan should be reviewed by all appropriate parties and revised as necessary, taking into consideration the lessons learned during the previous phases of the pandemic.

3.2. Re-entry Considerations and Environmental Surety

It can be expected that the local health department and/or NH DPHS will be consulted as re-entry criteria and environmental decontamination begin to be established. However, it is the responsibility of the Department of Environmental Services (DES) to address environmental decontamination.

An environmental contractor usually executes environmental decontamination. In the case of pandemic influenza, environmental surfaces may be decontaminated with ordinary household detergents. Clothing and linens may be laundered with a minimum of warm water and detergent. The CDCS will advise health care facilities, first responders, and others, including the general public, as to the specific decontamination guidelines at the time of the pandemic.

SECTION IV. PLAN MAINTENANCE

1. PLAN EVALUATION AND REVISION PROCEDURES

This plan is a fluid document that continues to grow to meet the needs of the community, and it adapts as those needs change. The ability to adapt to a constantly changing environment and circumstances is a direct function of how well this plan is maintained. Successful plan maintenance will be achieved through regular review, updating, training, and drills & exercises.

1.1. Plan Updating

As positions, assignments and the environment surrounding this plan change, it must be updated to reflect new information. This plan will be updated at such time as may be necessary, and at least annually. Updating of this plan will be preceded by an appraisal of its contents and/or a test or exercise and critique of the plan. Execution of this plan in response to an actual event will be considered a test and will require critique and after action report to be submitted to BEM. Those items subject to frequent change shall be reviewed annually for possible updating. They include but are not limited to:

- Community and facility notification and alerting lists
- Identity and contact numbers for response personnel/organizations
- Inventories of critical equipment, supplies and other resources
- Memoranda of Understanding / Agreement (MOU / MOA)
- Applicable laws and statutes

It is the responsibility of the State Epidemiologist in coordination with the BEM to ensure this *Influenza Pandemic Public Health Preparedness and Response Plan* is reviewed, updated and approved every year.

1.2. Plan Revision

The following policies apply to the assessment and updating of the plan:

It is the responsibility of State Epidemiologist and the BEM to coordinate the review and update of this plan. The BEM, whose responsibility it is to update the *PH EPRP* and all of its supporting documents, including this plan, will maintain and store this plan for the State of NH, and DPHS will submit any changes to the BEM.

In conducting the plan review and update, the following agencies that play a role in the execution of this plan will be asked for input and support:

Agency
American Red Cross
Department of Environmental Services
DHHS, Division of Public Health Services:
• Communicable Disease Control Section
• Communicable Disease Surveillance Section
DHHS, Immunization Program
DHHS Legal Team
DHHS Public Information Office
Department of Safety (DOS):
• Law enforcement personnel
• NH Bureau of Emergency Management
• Division of Fire Standards & Training and EMS
ESF-8 Coordinator
Mass Prophylaxis Ethics Committee
NH Public Health Laboratories
Office of the Medical Director

BEM shall serve as the office of record for the *PH EPRP* and its supporting materials, including this plan. This office shall maintain files relative to the planning effort and shall keep an inventory of emergency public information and other planning and training materials.

As changes are made, dated and approved, the relevant changed pages will be posted.

BEM shall maintain a list of plan holders to insure all parties receive appropriate changes.

2. DRILLS AND EXERCISES

The NH DPHS will participate in both internal and external emergency response drills and exercises used to test the effectiveness and readiness of the *PH EPRP* and this plan. The *PH EPRP* lists the different types of exercises that can be developed and executed to test emergency response plans, and in this case that which involves influenza pandemic. Both State and local officials have been attending orientations, discussions, and tabletop exercises regarding influenza pandemic. The first statewide full-scale influenza pandemic drill will take place in November of 2005, and it will test a variety of issues relating to a pandemic. Examples of these issues include hospital surge capacity, PHL specimen testing capacity, CDSS systems, and CDCS case investigation threshold. Following the drill, an after action review will be performed and used in planning future exercises and drills.

APPENDIX 1: DEFINITIONS

An **antiviral** medication destroys or inhibits the growth and reproduction of viruses.

A **confirmed case** of influenza disease is a person with influenza-like illness and with laboratory-confirmed influenza virus infection. However, a diagnosis of influenza is usually made on a clinical basis, particularly if influenza has been reported in the community.

Community containment measures refer to the separation of infected or exposed persons from non-infected persons by use of isolation, quarantine, or other restrictions on movement and activities.

A **contact** is a person who has been exposed to an influenza case during the infectious period. A **close contact** is a person who has cared for or lived with someone with influenza or had direct contact with respiratory secretions or body fluids of a patient with influenza. Examples of close contact include kissing or hugging, sharing eating or drinking utensils, talking to someone within 3 feet for greater than 15 minutes, and touching someone directly. Close contact does not include activities such as walking by a person or sitting across a person in a waiting room or office for a brief time.

Health care worker refers to any employee who has close contact within 3 feet of patients, patient-care areas (i.e., patient rooms, procedure areas), or patient-care items (i.e., linens and other waste).

The **incubation period** is the time from exposure to an infectious disease to symptom onset. The incubation period for influenza is usually two days, but can vary from one to five days.

Infection control measures decrease the risk for transmission of infectious agents through proper hand hygiene, scrupulous work practices, and use of PPE (masks, gloves, gowns, and eye protection). The types of infection control measures are based on how an infectious agent is transmitted and include standard, contact, droplet, and airborne precautions (http://www.cdc.gov/ncidod/hip/ISOLAT/Isolat.htm). The recommendations for influenza are standard, contact, and droplet precautions, defined below:

- **Standard precautions** are work practices required for the basic level of infection control. They center on proper hand hygiene and include use of PPE to serve as protective barriers and appropriate handling of clinical waste.
- **Enhanced precautions** are enhanced work practices designed to reduce the transmission of infectious agents by any direct & indirect contact, droplet, and also by airborne transmission. They include standard precautions plus additional measures taken to prevent airborne transmission (see Airborne precautions).
- **Contact precautions** are work practices designed to reduce the risk of transmitting infectious agents by direct or indirect contact with an infectious person. Direct contact transmission involves a direct body surface–to–body surface contact and physical transfer of infectious agents between an infected person and a susceptible host. Indirect–contact transmission involves contact of a susceptible host with a contaminated intermediate object, such as contaminated instruments or dressings, or contaminated hands that are not washed or gloves that are not changed between patients. Contact precautions may also include the use of PPE (gloves, gown, surgical mask, goggles or face shield) to reduce the spread of infectious agents.
- **Droplet precautions** are designed to reduce the risk of droplet transmission of infectious agents. Droplet transmission occurs when droplets containing infectious agents generated by an infectious person are propelled a short distance through the air (i.e., by coughing, sneezing, or talking) and deposited on the conjunctivae or mucous membranes of the mouth or nose of a susceptible person. Droplet precautions include the use of PPE (gloves, gown, surgical or other mask, and goggles or face shield) to reduce the spread of infectious agents.

- **Airborne precautions** include the placement of the case in an airborne isolation room (AIR) with negative air pressure and the use of N-95 fit-tested [or other National Institute of Occupational Safety and Health (NIOSH) approved] respirator by individuals entering the room. Airborne transmission occurs when disease particles <5um in size are released in the air by an infectious person and then persist in the environment long enough to transmit to other individuals in that environment.

Influenza-like illness (ILI) is defined as 1) a fever ≥ 100.4°F and 2) cough and/or sore throat in the absence of a known cause.

An **influenza pandemic** is a worldwide outbreak of a novel influenza virus causing sudden, pervasive illness in all age groups, and can severely impact even otherwise healthy individuals. Influenza pandemics occur infrequently and at irregular intervals and have the potential for substantial impact resulting in increased morbidity and mortality, significant social disruption, and severe economic costs.

Isolation and quarantine are standard practices in public health, and both aim to control exposure to infected or potentially infected persons. Both may be used voluntarily or compelled by public health authorities and can be applied on an individual or population level.

- **Isolation** refers to the separation of persons with a specific contagious illness from contact with susceptible persons and the restriction of their movement to contain the spread of that illness. Isolation usually occurs in a hospital but can be in a home or dedicated isolation facility.
- **Quarantine** refers to the separation and restriction of movement of well persons who may have been exposed to an infectious agent and may be infected but are not yet ill. Quarantine usually occurs in the home but can be in a dedicated facility or hospital. The term "quarantine" can also be applied to restrictions of movement into or out of buildings, other structures, and public conveyances. States generally have authority to invoke and enforce quarantine within their jurisdictions, although quarantine laws vary among states. The CDC is also empowered to detain, medically examine, or conditionally release persons suspected of carrying certain communicable diseases at points of arrival in and departure from the United States or across state lines.

    - **Work quarantine** – In the event that quarantine is used as an occupational exposure management tool, some health care workers (HCWs) may need to continue working to ensure sufficient staffing levels. Appropriate measures should be developed for HCWs to comply with quarantine orders and to continue working at the health care facility. Limitations on alternative employment will be needed.

Nosocomial refers to a health care setting, such as a hospital or clinic. Typically, nosocomial transmission refers to spread of an infectious disease from a patient in a health care setting or from a health care worker to another patient, worker, or visitor in the same setting.

An **outbreak** is a sudden increase in the number of cases of a specific disease or clinical symptom.

Personal protective equipment (PPE) is barrier protection to be used by an individual to prevent disease transmission. PPE may include gowns, gloves, masks, goggles, or face shields. The type of mask (i.e., surgical, N95, or powered, air-purified respirator) is disease-specific and defined in the type of precautions.

Prophylaxis is the prevention of or protective treatment for a disease.

Respiratory hygiene and cough etiquette refers to the institution of public health measures to avert the transmission of influenza and/or other infectious diseases. The specific measures are listed in Appendix 2.

APPENDIX 2: GUIDELINES FOR RESPIRATORY HYGIENE AND COUGH ETIQUETTE

Institution of public health measures for universal respiratory hygiene and cough etiquette will avert influenza and other infectious disease transmission. Key features of this campaign include:

• Provide surgical masks to all patients with symptoms of a respiratory illness; provide instructions on the proper use and disposal of masks

• For patients who cannot wear a surgical mask, provide tissues and instructions on when to use them (i.e., when coughing, sneezing, or controlling nasal secretions), how and where to dispose of them, and the importance of hand hygiene after handling this material

• Provide hand hygiene materials in waiting room areas and encourage patients with respiratory symptoms to perform hand hygiene

• Designate an area in waiting rooms where patients with respiratory symptoms can be segregated (ideally by at least 3 feet) from other patients who do not have respiratory symptoms

• Place patients with respiratory symptoms in a private room or cubicle as soon as possible for further evaluation

• Implement use of surgical or procedure masks by health care personnel during the evaluation of patients with respiratory symptoms

• Consider the installation of Plexiglas barriers at the point of triage or registration to protect health care personnel from contact with respiratory droplets

• If no barriers are present, instruct registration and triage staff to remain at least 3 feet from unmasked patients and to consider wearing surgical masks during respiratory infection season

• Continue to use droplet precautions to manage patients with respiratory symptoms until it is determined that the cause of symptoms is not an infectious agent that requires precautions beyond standard precautions

Posters to promote hand hygiene, as well as respiratory hygiene and cough etiquette will be available on the DHHS website at http://www.dhhs.nh.gov . See Appendix 6 for a preview of these posters.

COMMUNICABLE DISEASE INVESTIGATION REPORT v02/05

New Hampshire Communicable Disease Control and Surveillance Section

YEAR _____

NETSS ID _____

QA checked by _____

DISEASE:_____REPORT DATE_____

Patient's Name _____

Date of Birth_____ Age _____ ☐ Male ☐ Female

Address_____

City/Town _____ County _____ State____ Zip _____

Home Phone_____ Work Phone _____

Occupation/Employment_____

Does patient know of diagnosis? ☐ NO ☐ YES

If reporting a Vaccine Preventable Disease, please indicate if patient was previously vaccinated for this infection:

☐ NO ☐ YES: Date(s) Administered_____

Date of onset _____ **Treatment**

Diagnosis date_____ Date_____

Date of test_____ Drug_____

Type of test_____ Dosage_____

TB (PPD) mm _____

Chest Xray? ☐ NO ☐ YES --> Date_____Results: ☐ Normal ☐ Abnormal

Reporting source_____Phone _____

Facility_____City _____

Health Care Provider_____ Phone _____

Inital report taken by_____ Date _____

Assigned / Faxed to (PHN)_____ Date _____

Completed by (PHN)_____ Date _____

Race

- ☐ White
- ☐ Black
- ☐ Asian /Pacific Islander
- ☐ Native Am./Alaskan Native
- ☐ Other
- ☐ Unknown

Ethnicity

- ☐ Hispanic
- ☐ Not Hispanic

Miscellaneous Information

(check all that apply)

- ☐ Refugee
- ☐ Pregnant
- ☐ Health Care Worker
- ☐ Nursing Home Resident / Worker
- ☐ Day Care Child / Worker
- ☐ Food Service Worker
- ☐ Deceased
- ☐ Hospitalized (where?)

Outbreak Associated

- ☐ 1. Yes
- ☐ 2. No
- ☐ 9. Unknown

Imported

- ☐ 1. Acquired in NH
- ☐ 2. Acquired outside the US
- ☐ 3. Acquired in another state
- ☐ 9. Unknown

Case Status

- ☐ 1. Confirmed (meets CDC case definitions)
- ☐ 2. Probable (meets CDC case definitions)
- ☐ Not a case
- ☐ Carrier
- ☐ Unknown / Lost to follow up
- ☐ Out of State

NOTES:

Standard Precautions
+
Contact Precautions
Droplet Precautions
Airborne Infection Isolation

Contact: For patients known or suspected to have illnesses transmitted by direct or indirect patient contact

- Private room preferred
- Gloves
- Gowns
- Hand washing with antimicrobial agent

Droplet: For prevention of transmission of disease in particles >5 microns in size, which may travel short distances (≤ 3 feet) from known or suspected patients with illness

- *Contact Precautions plus:*
- Mask within 3 feet of patient:
  - Should be worn once and then discarded; however, if patients are cohorted and multiple patients need to be seen within cohort, it may be practical to wear for the duration of the activity.
  - Change when becomes moist
  - Do not leave around neck
  - Perform hand hygiene after touching mask.
- Wear goggles/face shield when spray or splatter of infectious material can be anticipated

Airborne: For prevention of transmission from particles <5 microns, which may remain suspended in the air for long periods of time

- *Contact & Droplet Precautions plus:*
- Negative pressure ventilation
- Minimum of 6 air exchanges/hour
- Use a **fit-tested** respirator, NIOSH approved N-95 (or greater) filtering facepiece (i.e. disposable) respirator

INFECTION CONTROL PRECAUTIONS FOR CAREGIVERS IN THE HOME OF A PANDEMIC INFLUENZA PATIENT:

- Handwash frequently, especially after contact with the influenza patient, with soap and water, or use an alcohol-based hand rub
- Patient and/or caregiver may wear a surgical or procedure mask
- Wash soiled dishes and utensils in dishwasher, or if by hand with warm water and soap. Patient utensils do not need to be separated from the other household utensils when washing.
- Wash laundry of patient in standard washing machine with warm or cold water and ordinary household detergent. Patient laundry does not need to be separated from the other household laundry when washing. The individual handling the laundry should perform handwashing afterwards.
- Tissues used by the patient should be disposed of with other household waste.
- Environmental surfaces in the home should be cleaned with ordinary household cleaners.

New Hampshire
Department of
Health and Human Services

Fact Sheet

10/11/04

Influenza

What is influenza (the flu)?

Influenza, commonly called "the flu," is caused by the influenza virus, which infects the respiratory tract (nose, throat, lungs). The flu usually spreads from person to person when an infected person coughs, sneezes, or talks and the virus is sent into the air. The flu is more likely than other viral respiratory infections, such as the common cold, to cause severe illness and life-threatening complications.

What are the symptoms of the flu?

Symptoms of flu include fever, headache, extreme tiredness, dry cough, sore throat, runny nose, and muscle aches. Children can have additional gastrointestinal symptoms, such as nausea, vomiting, and diarrhea, but these symptoms are uncommon in adults. Although the term "stomach flu" is sometimes used to describe vomiting, nausea, or diarrhea, these illnesses are caused by certain other viruses, bacteria, or possibly parasites, and are rarely related to influenza.

Does the flu have complications?

Yes. Some of the complications caused by flu include predisposition to bacterial pneumonia, dehydration, and worsening of chronic medical conditions, such as congestive heart failure, asthma, or diabetes. Children may have sinus problems and ear infections as complications. Those aged 65 years and older and persons of any age with chronic medical conditions are at highest risk for serious complications of flu.

How do I find out if I have the flu?

It is very difficult to distinguish the flu from other viral or bacterial causes of respiratory illnesses on the basis of symptoms alone. A test can confirm that an illness is influenza if the patient is tested within the first two to three days after symptoms begin. In addition, a doctor's examination may be needed to determine whether someone has a complication from influenza.

How soon will I get sick if I am exposed to the flu?

The time from when a person is exposed to flu virus to when symptoms begin is about one to four days, with an average of about two days.

How long is someone who has the flu contagious?

Persons are infectious usually from one day prior to becoming sick to about 5 days after they first develop symptoms. Children may be contagious longer, and some are infectious for 6 days after they become ill.

What can I do to protect myself against the flu?

By far, the single best way to prevent the flu is for individuals, especially persons at high risk for serious complications from the flu, to get the flu vaccine each fall. In the absence of a flu shot, there are still many things people can and should be doing to avoid catching the flu:

- Wash your hands frequently with soap and water, especially before touching food, after using the bathroom, and after changing diapers
- Use an antibacterial hand gel for the times you cannot wash your hands with soap and water
- Use a tissue to cover your nose and mouth when you cough or sneeze, throw away the tissue, then wash your hands
- Stay home from work or school if you have flu-like symptoms until 48 hours after the symptoms stop
- As much as possible, stay away from people who have flu-like symptoms
- Eat right, exercise, and get plenty of sleep
- Wash frequently touched objects, such as door

129 Pleasant Street □ Concord, New Hampshire 03301 □ 800-852-3345 □ www.dhhs.nh.gov

handles, kitchen and bathroom surfaces, and phone receivers, with a household disinfectant
- Avoid sharing utensils, such as cups and spoons

Can the flu shot give you the flu?

No. The licensed injectable flu vaccine used in the United States, which is made from inactivated or killed flu viruses, cannot cause the flu and does not cause flu illness.

Can antiviral medications cure the flu?

When started within the first two days of illness, an antiviral medication can reduce the duration of the flu but cannot cure it outright. All antiviral medications must be prescribed by a doctor. These medications are effective against flu viruses, but they are not effective against other viruses or bacteria that can cause symptoms similar to influenza. They also are not effective for treating bacterial infections that can occur as complications of influenza. Antibiotics will not help against the flu because they only work against bacteria and the flu is caused by a virus.

When is the flu season in the United States?

In the United States, the peak of flu season generally occurs anywhere from late December through March. The health impact (infections and deaths) of a flu season varies from year to year. The Centers for Disease Control and Prevention monitors circulating flu viruses and their related disease activity and provides influenza reports each week from October through May. Influenza is also monitored in New Hampshire by reports from health care providers, long-term care facilities, and schools, and by reports of flu culture test results from the Public Health Laboratories.

Do other respiratory viruses circulate during the flu season?

In addition to the flu virus, several other respiratory viruses also can circulate during the flu season and can cause symptoms and illness similar to those seen with flu infection. These non-flu viruses include rhinovirus (one cause of the "common cold") and respiratory syncytial virus (RSV), which is the most common cause of severe respiratory illness in young children as well as a leading cause of death from respiratory illness in those aged 65 years and older.

For more information about this year's flu season, call the New Hampshire Department of Health and Human Services flu information line at 1-866-273-6453. For further information about influenza and the flu season, refer to the Centers for Disease Control and Prevention website at www.cdc.gov or the New Hampshire Department of Health and Human Services website at www.dhhs.nh.gov.

129 Pleasant Street □ Concord, New Hampshire 03301 □ 800-852-3345 □ www.dhhs.state.nh.us

New Hampshire
Department of
Health and Human Services

Fact Sheet

Avian Influenza

What is avian influenza (bird flu)?
Avian influenza is caused by a virus that exists naturally in wild birds. Wild birds usually do not become sick, but they carry the virus and can pass it on to non-wild birds, such as chickens, turkeys, and ducks (fowl), which can become very sick and die.

How is the disease spread?
Certain water birds act as hosts to influenza viruses by carrying the virus in their intestines and shedding it in bodily fluids, such as saliva, nasal secretions, and feces. Other birds are infected when they come in contact with these fluids. Humans can become infected through contact with infected poultry or these contaminated fluids.

Do bird flu viruses infect people?
Bird flu viruses do not generally infect people, but there have been several instances of human infection from bird flu viruses since the first reported case in 1997. There are many different types, and only a few of them can make people sick, including the H5N1 strain recently seen in Asia.

What are the symptoms of avian influenza in people?
The reported symptoms of avian influenza in humans have ranged from typical influenza-like symptoms (e.g., fever, cough, sore throat, and muscle aches) to eye infections, pneumonia, acute respiratory distress, viral pneumonia, and other severe and life-threatening complications. The symptoms may depend on which virus caused the infection.

Is there a test for avian influenza?
The Centers for Disease Control and Prevention (CDC) has the capability to test for many avian influenza viruses.

What is done to stop an infection among birds once it happens?
All infected birds and those in the same flocks with them should be killed. People who work with infected chickens, and other fowl should be vaccinated against human influenza. The transportation of chickens, turkeys, and ducks and their export should be stopped in the affected regions. Disinfectant also kills the virus and should be used in contaminated areas such as chicken pens.

Is it safe to eat chicken or turkey?
Yes. General precautions should always be taken when handling any raw meat, including fowl, to avoid possibly spreading germs. These measures include washing hands and surfaces before and after food preparation; avoiding using the same utensils on raw meat as on other foods, even cooked meat; and cooking raw meat thoroughly. The same steps should be taken when handling raw eggs too.

How is bird flu in humans treated?
An avian influenza vaccine is being developed and tested for use in humans. Some studies have shown that antiviral prescription medications approved for human influenza

129 Pleasant Street ◆ Concord, NH 03301 ◆ 800-852-3345 ◆ www.dhhs.nh.gov

strains may have some effect on avian influenza.

What is the bird flu that has recently been reported in Asia?

Outbreaks of avian influenza (type H5N1) occurred among poultry in eight countries in Asia during late 2003 and early 2004. At that time, millions of birds in the infected countries were killed to try to control the outbreak. The outbreak began again in late June 2004 and is still ongoing. There have also been reported human cases and some deaths in several countries in Asia.

What is the risk in the U.S. to people from the H5N1 virus in Asia?

The H5N1 virus does not usually infect humans. There have been some cases of people becoming sick in Asia, but because all influenza viruses have the ability to change, scientists are concerned that the H5N1 virus could one day be able to easily infect people and spread from person to person. If this happens and the influenza spreads around the world it would be called a pandemic.

What should I be doing?

There are several things people can do as precautionary measures, including:

- Practice good hygiene, especially frequent hand washing, covering your mouth when you cough or sneeze, and then washing your hands again
- The CDC advises that if you are planning to travel to countries in Asia with known outbreaks of H5N1 influenza, avoid poultry farms, contact with animals in live food markets, and any surfaces that appear to be contaminated with feces from poultry or other animals
- Listen to the news and stay informed if there is an outbreak
- If you are sick, stay home from work or school; consult your health care provider if symptoms persist or are severe.

For specific concerns or questions about avian influenza, call the New Hampshire Department of Health and Human Services, Communicable Disease Control Section at 603-271-4496 or 800-852-3345 x4496. For further information, refer to the Centers for Disease Control and Prevention website at www.cdc.gov, the World Health Organization website at www.who.int, or the New Hampshire Department of Health and Human Services website at www.dhhs.nh.gov.

129 Pleasant Street ◆ Concord, NH 03301 ◆ 800-852-3345 ◆ www.dhhs.nh.gov

INACTIVATED INFLUENZA VACCINE

WHAT YOU NEED TO KNOW

1 Why get vaccinated?

Influenza ("flu") is a very contagious disease.

It is caused by the influenza virus, which spreads from infected persons to the nose or throat of others.

Other illnesses can have the same symptoms and are often mistaken for influenza. But only an illness caused by the influenza virus is really influenza.

Anyone can get influenza. For most people, it lasts only a few days. It can cause:

· fever · sore throat · chills · fatigue
· cough · headache · muscle aches

Some people get much sicker. Influenza can lead to pneumonia and can be dangerous for people with heart or breathing conditions. It can cause high fever and seizures in children. Influenza kills about 36,000 people each year in the United States, mostly among the elderly.

Influenza vaccine can prevent influenza.

2 Inactivated Influenza vaccine

There are two types of influenza vaccine:

An **inactivated** (killed) vaccine, given as a shot, has been used in the United States for many years.

A **live**, weakened vaccine was licensed in 2003. It is sprayed into the nostrils. *This vaccine is described in a separate Vaccine Information Statement.*

Influenza viruses are constantly changing. Therefore, influenza vaccines are updated every year, and an annual vaccination is recommended.

For most people influenza vaccine prevents serious illness caused by the influenza virus. It will *not* prevent "influenza-like" illnesses caused by other viruses.

It takes about 2 weeks for protection to develop after the shot, and protection can last up to a year.

Inactivated influenza vaccine may be given at the same time as other vaccines, including pneumococcal vaccine.

Some inactivated influenza vaccine contains thimerosal, a preservative that contains mercury. Some people believe thimerosal may be related to developmental problems in children. In 2004 the Institute of Medicine published a report concluding that, based on scientific studies, there is no evidence of such a relationship. If you are concerned about thimerosal, ask your doctor about thimerosal-free influenza vaccine.

3 Who should get inactivated influenza vaccine?

Influenza vaccine can be given to people 6 months of age and older. It is recommended for **people who are at risk of serious influenza or its complications**, and for **people who can spread influenza to those at high risk** (including all household members):

People at high risk for complications from influenza:

- **All children** 6-23 months of age.
- People **65 years of age and older**.
- Residents of **long-term care facilities** housing persons with chronic medical conditions.
- People who have **long-term health problems** with:
  - heart disease
  - kidney disease
  - lung disease
  - metabolic disease, such as diabetes
  - asthma
  - anemia, and other blood disorders
- People with certain conditions (such as **neuromuscular disorders**) that can cause breathing problems.
- People with a **weakened immune system** due to:
  - HIV/AIDS or other diseases affecting the immune system
  - long-term treatment with drugs such as steroids
  - cancer treatment with x-rays or drugs
- People 6 months to 18 years of age on **long-term aspirin treatment** (these people could develop Reye Syndrome if they got influenza).
- Women who will be **pregnant** during influenza season.

People who can spread influenza to those at high risk:

- **Household contacts and out-of-home caretakers** of infants from 0-23 months of age.
- Physicians, nurses, family members, or anyone else in **close contact with people at risk** of serious influenza.

Influenza vaccine is also recommended for adults 50-64 years of age and anyone else who wants to **reduce their chance of catching influenza.**

An annual flu shot should be *considered* for:

- People who provide **essential community services.**
- People living in **dormitories** or under other crowded conditions, to prevent outbreaks.
- People at high risk of influenza complications who **travel** to the Southern hemisphere between April and September, or to the tropics or in organized tourist groups at any time.

4 When should I get influenza vaccine?

The best time to get influenza vaccine is in **October** or **November**.

Influenza season usually peaks in February, but it can peak any time from November through May. So getting the vaccine in December, or even later, can be beneficial in most years.

Some people should get their flu shot in ***October*** or earlier:

- people **50 years of age and older**,
- younger people at **high risk** from influenza and its complications (including **children 6 through 23 months of age**),
- **household contacts** of people at high risk,
- **healthcare workers**, and
- **children younger than 9 years of age** getting influenza vaccine for the first time.

Most people need one flu shot each year. **Children younger than 9 years of age getting influenza vaccine for the first time** should get 2 doses, given at least one month apart.

5 Some people should talk with a doctor before getting influenza vaccine

Some people should not get inactivated influenza vaccine or should wait before getting it.

- Tell your doctor if you have any **severe** (life-threatening) allergies. Allergic reactions to influenza vaccine are rare.
  - Influenza vaccine virus is grown in eggs. People with a severe egg allergy should not get the vaccine.
  - A severe allergy to any vaccine component is also a reason to not get the vaccine.
  - If you have had a severe reaction after a previous dose of influenza vaccine, tell your doctor.
- Tell your doctor if you ever had Guillain-Barré Syndrome (a severe paralytic illness, also called GBS). You may be able to get the vaccine, but your doctor should help you make the decision.
- People who are moderately or severely ill should usually wait until they recover before getting flu vaccine. If you are ill, talk to your doctor or nurse about whether to reschedule the vaccination. People with a **mild illness** can usually get the vaccine.

6 What are the risks from inactivated influenza vaccine?

A vaccine, like any medicine, could possibly cause serious problems, such as severe allergic reactions. The risk of a vaccine causing serious harm, or death, is extremely small.

Serious problems from influenza vaccine are very rare. The viruses in inactivated influenza vaccine have been killed, so you cannot get influenza from the vaccine.

Mild problems:

• soreness, redness, or swelling where the shot was given
• fever • aches

If these problems occur, they usually begin soon after the shot and last 1-2 days.

Severe problems:

- Life-threatening allergic reactions from vaccines are very rare. If they do occur, it is within a few minutes to a few hours after the shot.
- In 1976, a certain type of influenza (swine flu) vaccine was associated with Guillain-Barré Syndrome (GBS). Since then, flu vaccines have not been clearly linked to GBS. However, if there is a risk of GBS from current flu vaccines, it would be no more than 1 or 2 cases per million people vaccinated. This is much lower than the risk of severe influenza, which can be prevented by vaccination.

7 What if there is a severe reaction?

What should I look for?

- Any unusual condition, such as a high fever or behavior changes. Signs of a serious allergic reaction can include difficulty breathing, hoarseness or wheezing, hives, paleness, weakness, a fast heart beat or dizziness.

What should I do?

- **Call** a doctor, or get the person to a doctor right away.
- **Tell** your doctor what happened, the date and time it happened, and when the vaccination was given.
- **Ask** your doctor, nurse, or health department to report the reaction by filing a Vaccine Adverse Event Reporting System (VAERS) form.

  Or you can file this report through the VAERS web site at www.vaers.hhs.gov, or by calling 1-800-822-7967.

  VAERS does not provide medical advice.

8 The National Vaccine Injury Compensation Program

In the event that you or your child has a serious reaction to a vaccine, a federal program has been created to help pay for the care of those who have been harmed.

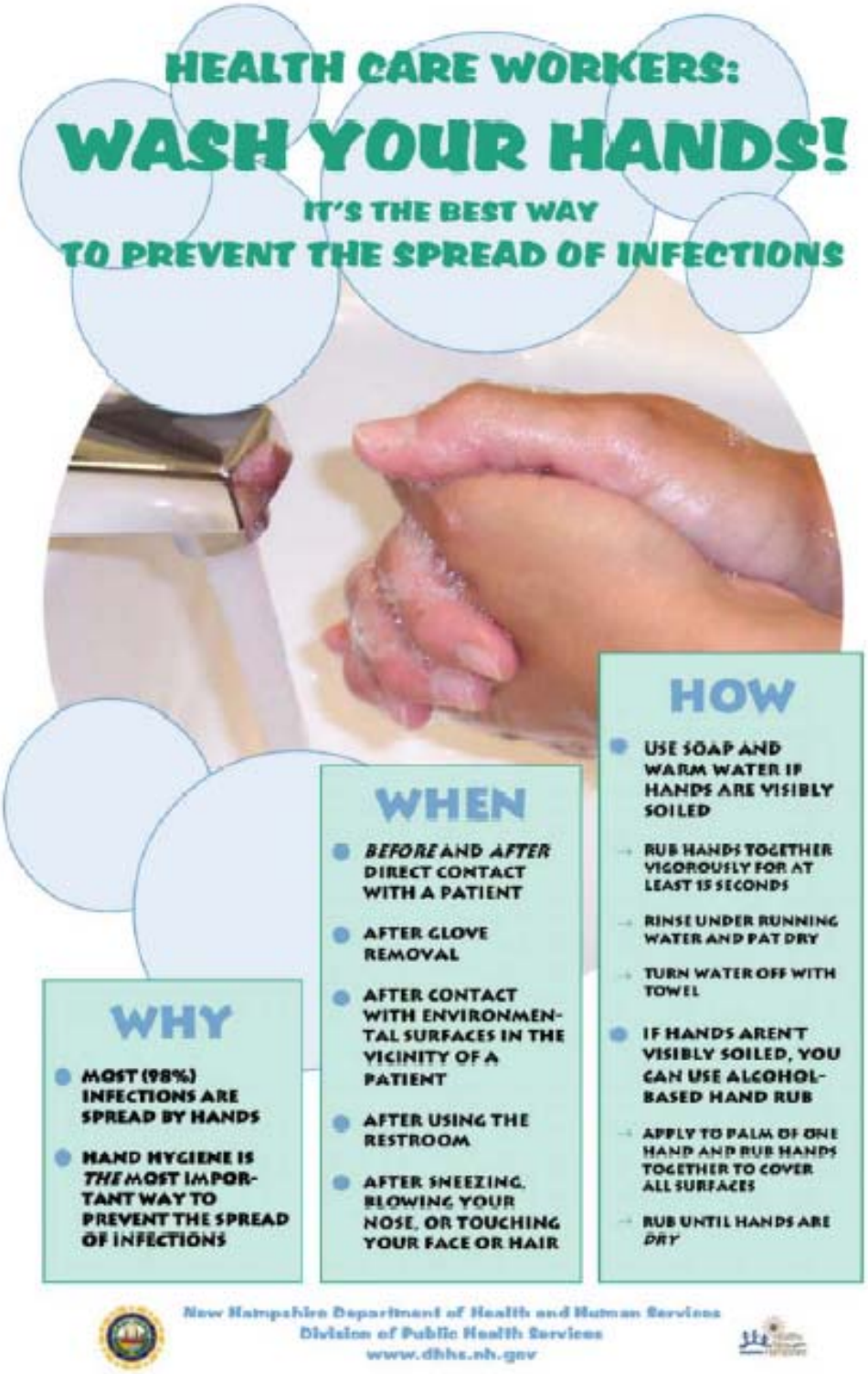
For details about the National Vaccine Injury Compensation Program, call **1-800-338-2382** or visit their website at **www.hrsa.gov/osp/vicp**

9 How can I learn more?

- Ask your immunization provider. They can give you the vaccine package insert or suggest other sources of information.
- Call your local or state health department.
- Contact the Centers for Disease Control and Prevention (CDC):
  - Call **1-800-232-4636 (1-800-CDC-INFO)**
  - Visit CDC's website at **www.cdc.gov/flu**

DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
NATIONAL IMMUNIZATION PROGRAM

Vaccine Information Statement - Interim
Inactivated Influenza Vaccine (7/18/05) 42 U.S.C. §300aa-26


HEALTH CARE WORKERS:
WASH YOUR HANDS!
IT'S THE BEST WAY
TO PREVENT THE SPREAD OF INFECTIONS
WHY
MOST (98%) INFECTIONS ARE SPREAD BY HANDS
HAND HYGIENE IS THE MOST IMPORTANT WAY TO PREVENT THE SPREAD OF INFECTIONS
WHEN
BEFORE AND AFTER DIRECT CONTACT WITH A PATIENT
AFTER GLOVE REMOVAL
AFTER CONTACT WITH ENVIRONMENTAL SURFACES IN THE VICINITY OF A PATIENT
AFTER USING THE RESTROOM
AFTER SNEEZING, BLOWING YOUR NOSE, OR TOUCHING YOUR FACE OR HAIR
HOW
USE SOAP AND WARM WATER IF HANDS ARE VISIBLY SOILED
RUB HANDS TOGETHER VIGOROUSLY FOR AT LEAST 15 SECONDS
RINSE UNDER RUNNING WATER AND PAT DRY
TURN WATER OFF WITH TOWEL
IF HANDS ARENT VISIBLY SOILED, YOU CAN USE ALCOHOL-BASED HAND RUB
APPLY TO PALM OF ONE HAND AND RUB HANDS TOGETHER TO COVER ALL SURFACES
RUB UNTIL HANDS ARE DRY
New Hampshire Department of Health and Human Services
Division of Public Health Services
www.dhhs.nh.gov

New Hampshire Department of Health and Human Services
Division of Public Health Services
www.dhhs.nh.gov

Attach box of masks here.

STATE OF NEW HAMPSHIRE
DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH SERVICES

29 HAZEN DRIVE, CONCORD, NH 03301-6504
603-271-4482 1-800-852-3345 Ext. 4482
Fax: 603-271-3850 TDD Access: 1-800-735-2964

John A. Stephen
Commissioner

Mary Ann Cooney
Director

Guidance for Educational Institutions Pandemic Influenza Response

I. Background

Influenza, commonly called "the flu," is caused by the influenza virus, which infects the respiratory tract (nose, throat, lungs). The flu usually spreads from person to person when an infected person coughs, sneezes, or talks and the virus is sent into the air. The flu can cause illness in all ages, and it is more likely than other viral respiratory infections, such as the common cold, to cause severe illness and life-threatening complications

Avian influenza, also known as "avian flu" or "bird flu," is caused by one of many viruses that exist naturally in wild birds. Wild birds usually do not become sick, but they can carry the virus and pass it on to non-wild birds, such as chickens, turkeys, and ducks (fowl), which can become very sick and die. Flu viruses can exist not only in birds, but also other animals. Bird flu viruses do not generally infect people. However, since 1997, there have been over 160 reported cases of human infection from avian influenza A H5N1 (the scientific name for a strain of bird flu currently circulating) in Asia and parts of Eastern Europe. Humans can become infected with bird flu through contact with infected poultry or contaminated fluids, such as the birds' saliva, nasal secretions, and feces.

Because all influenza viruses have the ability to change, scientists are concerned that viruses including but not limited to the influenza A H5N1 virus could change so that it can easily spread from sick people to otherwise healthy people. If this happens, and the influenza spreads around the world, it would be called a pandemic. Pandemic influenza is a unique public health emergency. Outbreaks are expected to occur simultaneously throughout much of the country and in the State, preventing shifts in human and material resources that normally occur in most other natural disasters. For this reason, the State of New Hampshire Department of Health and Human Services (NH DHHS) recommends that institutions, such as educational facilities, plan now for their response to pandemic influenza.

II. Purpose

The purpose of this document is to assist educational institutions in their development of institution-specific pandemic influenza preparedness and response plans. Because a pandemic would most likely occur in phases, the activities in this guidance are also separated out by phases (see below). However, the activities are cumulative, and should carry over from one phase to the next. For a checklist of both preparedness and response activities, see Appendix 2: Suggested Checklist. This guidance is a fluid document that may be updated and edited as new information becomes available.

The development of this document is based on the following assumptions:

- In the event of an influenza pandemic the State will have minimal resources available for on-site local assistance, and therefore local authorities and institutions will be responsible for community-specific pandemic response plans, including the modification of this document so that it is institution-specific.
- Local communities may have emergency preparedness plans and/or pandemic influenza plans in place. Local community leaders and institutions will communicate so that each is aware of the others' plans.
- The federal government has limited resources allocated for State and local plan implementation, and therefore the State will provide supplementary resources in the event of a pandemic, which may include the redirection of personnel and monetary resources from other programs.
- The federal government has assumed the responsibility for developing materials and guidelines, including basic communication materials for the general public on influenza, influenza vaccine, antiviral agents, and other relevant topics in various languages; information and guidelines for health care providers; and training modules. Until these materials are developed, the State has the responsibility to develop such materials for its citizens.
- A novel influenza virus strain will likely emerge in a country other than the United States, but could emerge first in the United States and possibly in New Hampshire.
- It is highly likely that moderate or severe shortages of vaccine will exist early in the course of the pandemic and also possible that no vaccine will be available.
- The supply of antiviral medications used for prevention and treatment of influenza will be limited.

World Health Organization (WHO) Phases

The pandemic phases described in this document are those that have been established by the World Health Organization. The most recent publication of the phases is summarized in Table 1 below. The State's response to a pandemic will be guided by the WHO phase declaration (see *State of New Hampshire Influenza Pandemic Public Health Preparedness and Response Plan* [currently available at http://www.dhhs.nh.gov/DHHS/CDCS/flu-provider.htm]). This response will include specific considerations during each phase of the pandemic regarding surveillance, vaccine delivery, administration of antivirals, and communications. In addition, there must be actions taken on the local level in each phase, particularly with respect to community-based containment measures. This plan for educational institutions provides recommendations for activities in response to WHO phases and also notes the corresponding alert matrix system being used in the hospital-developed *Epidemic Respiratory Infection (ERI) plan* (see Table 2 and process below for further explanation of the ERI plan). It should be noted that at the time of writing this document (January 2006), we are in WHO Phase 3.

Table 1. WHO Pandemic Phases

Interpandemic period
Phase 1. Present in animals, low risk to humans
Phase 2. Present in animals, higher risk of human disease
Pandemic alert period
Phase 3 Human infection present, but no or very limited human-to-human spread
Phase 4 Evidence of increased human- to-human transmission, but still limited
Phase 5 Evidence of significant human-to-human transmission (substantial pandemic risk).
Pandemic period
Phase 6 Evidence of sustained transmission in general population.
Postpandemic Period

Based on WHO/CDS/CSR/GIP/2005.5: WHO global influenza preparedness plan. World Health Organization, Department of Communicable Disease Surveillance and Response. Global Influenza Programme. 2005.

Table 2. Epidemic Respiratory Infection (ERI) Alert Matrix

Five levels of alert corresponding to the type of transmission and the location of the cases.

What type of transmission is confirmed?	Where are the cases?	Are there cases at the educational institution?	Alert Level
None or sporadic cases only	Anywhere in the world	No	Ready
Efficient person-to-person transmission	Anywhere outside the US and bordering countries (Canada, Mexico)	No	Green
Efficient person-to-person transmission	In the US, Canada, or Mexico	No	Yellow
Efficient person-to-person transmission	In NH or bordering states; at educational facility	Doesn't matter; efficient transmission from known sources	Orange
Efficient person-to-person transmission	At educational facility	Yes, with efficient transmission, sources not clear	Red

III. Process

The first New Hampshire Influenza Pandemic Preparedness Plan was completed in 2001 and was modeled on the CDC guidance, Pandemic Influenza: Planning Guide for State and Local Officials, Version 2.1, January 1999. As the State's plan changed and progressed, it became clear that educational institutions, including those that are residential, require specific attention to issues such as surveillance, infection control, and case management. Therefore, this guidance was adapted from both the current *State of New Hampshire Influenza Pandemic Public Health Preparedness and Response Plan* and the *Readiness Plan for Epidemic Respiratory Infection* (ERI), the latter of which is now used by multiple hospitals throughout the State. The ERI plan was developed by the DHMC Emergency Preparedness team and was disseminated in 2005. It establishes a user-friendly alert matrix distinctive to respiratory infection outbreaks, which may be applicable in the event of an influenza pandemic.

This document has been developed by the NH Department of Health and Human Services (DHHS), Division of Public Health Service's Communicable Disease Control Section (CDCS).

IV. Authority/Legal Preparedness

The State of NH has designated DHHS to oversee the influenza pandemic planning process in cooperation with local health agencies and other partners. During a pandemic, DHHS will have primary responsibility for:

- Making recommendations to local health departments, health care providers and facilities, and the general public to aid in controlling the spread of influenza
- Maintaining surveillance systems to monitor the spread of disease
- Keeping the public informed

While no provision of law addresses pandemic influenza specifically, numerous statutory provisions authorize relevant actions. For institutions to effectively plan and respond to an influenza pandemic, they should be knowledgeable of the following legal issues:

- NH's laws and procedures on quarantine, isolation, closing premises, and suspending public meetings, which can be implemented to help control an epidemic
- Statutes for mandatory vaccination during an infectious disease emergency
- Medical volunteer licensure, liability, and compensation laws for in-state, out-of-state, and returning retired and non-medical volunteers
- Workers' compensation laws as they apply to health care workers and other essential workers who have taken antivirals for prophylaxis

The corresponding statute descriptions are summarized in the *State of NH Public Health Emergency Preparedness Plan* (currently in draft form).

V. Response Activities by Level of Alertness

Level Ready-Green (ERI alert matrix)/Interpandemic period (WHO)

When cases of an Epidemic Respiratory Infection (ERI) are occurring in countries other than the U.S., but have yet to be reported domestically or in neighboring countries, your institution should maintain a level of preparedness in the event that the ERI begins to spread globally. This is the level your institution should be maintaining currently. During this level, we recommend your institution take the actions listed below.

A. Access Control

- The institution will develop a plan and a timeline for implementing a policy that enables them to control access to the institution. There should be a plan to lock down certain entrances and exits, and to monitor use of others, if necessary. If applicable, institutions should involve their security personnel to accomplish these tasks. Institutions should not depend on outdoor screening & triage stations when creating plans, as in winter months this option may not be feasible.
- The institution will also develop a plan to close down or curtail campus transportation, including school buses and campus shuttles if necessary.

B. Surveillance, Screening and Triage

- The institution's health services personnel will screen all individuals at the time of registration at health services or nurse's office. For younger children, personnel may observe for cough. With older children, they may ask the following question: "Do you have a new cough that has developed over the last 10 days?" and will
    - Provide patients who have a new cough with a surgical mask and/or tissues.
    - Document data at time of screening and review each week for analysis of trends.
    - Clinical staff/school nurse will
        - Evaluate individuals who have a new cough for fever (temperature ≥100.4).
        - Place all individuals who have fever and a new cough on droplet precautions, pending further evaluation.
    - If private rooms are available, and evaluation requires isolation, individuals with fever and cough will be placed in a private room with droplet precautions. Otherwise, such individuals should be referred to local community health providers or hospitals for evaluation, with health services personnel calling ahead to alert staff of patient symptoms.
- The institution's health services staff have the authority to restrict individuals (staff and students) who have fever and a new cough from work, class, or any other group gathering. They also have the authority to send any student or staff home that they suspect may have a communicable disease that puts others in the institution at risk. The legal authority for exclusion from school is under RSA 200:39. This RSA is under Title XV, Education; 200, Health & Sanitation; 39, Exclusion from School, and is accessible on-line at http://gencourt.state.nh.us/rsa/html/XV/200/200-39.htm.
- Health services clinicians will screen individuals who report pneumonia or respiratory infection to identify possible clusters, or groups of ill individuals who may be linked.
    - Possible clusters will be reported to the State's Communicable Disease Control Section by calling (603) 271-4496 M-F 8AM-4:30 PM. Clusters may be defined as two or more clinically compatible individuals with onset of symptoms ≤ 10 days apart (this may be altered as more information about the pandemic influenza strain becomes available; NH DHHS will follow CDC recommendations as they are released).
- Informative infection control signs will be placed at all campus building entrances and common areas to encourage all persons entering the campus to self-screen (rotating the

posters periodically to maintain impact). Posters are available for download on the DHHS website: http://www.dhhs.nh.gov/DHHS/CDCS/flu-provider.htm .

- Via posters, campus staff will ask persons who have a new cough to wear a surgical mask or use tissues to cover their mouth and nose when coughing, and to use good hand hygiene during the time they need to be on-campus.
- The institution will advise all persons, including staff, students, and visitors, who have fever and cough to defer attending school or visiting the institution until their illness has resolved.

- Monitoring surveillance data
  - The health services personnel will monitor national, regional, and local data related to ERI. Information will be posted on the NH DHHS website.

C. Infection control/Precautions

- All staff, students, and visitors will use ***Droplet Precautions (private room and surgical mask within 3 feet of patient)*** for all contact with any individual who has a new cough and fever, until a diagnosis of a non-contagious respiratory illness, or an infection requiring a higher level of precautions, is made.
- If students, staff or visitors present with symptoms while at school, they should be provided a mask while awaiting transportation away from the facility.
- The institution's health services staff will use or provide for use a visible doorway "precautions sign" system to allow persons entering the room to know what type of protective equipment is needed.
- The institution will maintain adequate supplies at all times of surgical masks, waterless hand rub, surface cleaners & disenfectants, and tissues throughout public areas, classrooms, and meeting rooms, as well as within the Health Services facility. For cleaning and disinfecting surfaces from influenza viruses, the CDC recommends using an Environmental Protection Agency (EPA)-registered household disinfectant labeled for activity against bacteria and viruses, an EPA-registered hospital disinfectant, or EPA-registered chlorine bleach/hypochlorite solution. Label instructions should always be followed when using any of these disinfectants. If EPA-registered chlorine bleach is not available and a generic (i.e., store brand) chlorine bleach is used, mix ¼ cup chlorine bleach with 1 gallon of cool water.
- If possible, the institution will identify key areas throughout the campus which need to maintain core groups of N-95 respirator [or other National Institute of Occupational Safety & Health (NIOSH)-approved filtering facepiece respirator] fit-tested personnel
  - Each director is responsible for maintaining the appropriate number of trained and fit-tested staff
  - For a list of other NIOSH-approved respirators, see http://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/
- The institution will display hand-washing posters (can be downloaded from: http://www.dhhs.nh.gov) in high-traffic areas and classrooms.

D. Communication/Education

- The institution will develop a sustainable and effective plan for communication and promotion of messages relating to ERI to internal and external audiences. This should include identifying any needs for translation services and which languages are represented in the student population. If applicable, schools may wish to have translators review the information that will be provided to non-English speaking parents.

- A sustainable plan should be developed to orient and educate staff regarding basic readiness activities at the institution, and a strategy for activities to provide timely information to health services providers in the event of ERI.

- The institution should incorporate behavioral health providers in their communication plans to address the emotional needs of students, faculty and staff in the event of a pandemic threat or actual event that causes serious illness or death. For more information about the Disaster Behavioral Health Response teams in the State of NH, disaster behavioral health training, or would like to receive educational materials, please contact the Disaster Behavioral Health Coordinator at (603) 271-2231 or (800) 852-3792.

E. Additional Preparedness Activities

The following recommendations for vaccination campaigns apply to the regular influenza season. This is separate from vaccination campaigns that may take place during a pandemic. The purpose in the following recommendations for influenza vaccination during the regular influenza season is: to reduce morbidity from seasonal influenza transmission in vital workers if pandemic strain emerges, to reduce diagnostic confusion if a pandemic strain emerges (one may have a higher suspicion for pandemic strain if the patient is known to have been vaccinated against seasonal influenza), and to prepare communities for providing vaccination clinics in the event that vaccination for a pandemic strain is necessary.

- Offer all eligible staff, students, and visitors the opportunity to receive influenza vaccine on-site. This may be facilitated by holding vaccination clinics on designated days.
- If your institution cannot hold clinics on-site, refer to local clinics or collaborate with community health organizations to hold clinics to provide influenza vaccine to all eligible institution members of any age.
- Develop educational and promotional materials to promote availability and desirability of influenza vaccine for all.
- The administering provider of flu vaccine will document administration of influenza vaccine, preferably in a computerized database.
- Administrative, educational, and clinical leaders will promote maximum participation of staff and students in influenza vaccine program.

In addition to the above vaccination recommendations, the following are other preparedness activities to take place during the Level Ready-Green phases of a pandemic:

- Many institutions already have an Emergency Preparedness team. If the institution does not have an existing Emergency Preparedness team, one should be formed following Incident Command Structure (ICS). If additional training and/or help is needed in creating this team with adherence to ICS, please contact the NH Bureau of Emergency Management at (800) 852-3792 or (603) 271-2231.
- The team will designate an Incident Command core including senior administration, health services, communications, safety, engineering, and security, as applicable, with 7-day a week availability to respond to a potential outbreak of an ERI.
- The Emergency Preparedness team will be in charge of regular updates to staff, students, and parents. The team should meet approximately once a month.
- The Emergency Preparedness team will monitor the Health Alert Network and other communications from public health officials to review changes in recommendations

about screening criteria and will communicate changes to clinicians via some combination of email, intranet, or radiographic or laboratory reporting.

- The Emergency Preparedness team will address in their institution's plan how to accommodate severe staffing shortages of 20-30%, which may occur in the event of a pandemic. Alternatives may include staggered school times and telecommunications.

Level Yellow-Orange (ERI plan)/Pandemic Alert Period (WHO)

In the event that a case of Epidemic Respiratory Infection (ERI) affects a community member or a close contact of a community member of your institution, activities will be modified to reflect increased risk of exposure and disease spread within your community. The following are recommendations regarding activities of your institution that should be addressed in the event that a case of ERI is suspected or has been confirmed in your institution, but there is no documented community spread from this person to others. For example, this would include a student who returned to the institution with cough and fever after travel to an area known to have ERI, but has not spread the illness to anyone else.

Activities are cumulative through the phases, and therefore, those activities from the Level Ready-Green/Interpandemic Period should be carried over to this phase and supplement the recommendations below.

A. Access Control

- Review possible need to restrict vendors, visitors, and conferences/group activities.
- Implement applicable portions of the access control plan created in the "Ready-Green" phases.

B. Surveillance, Screening and Triage

- Infection control signs are posted at all entrances, and in all common areas (in dormitories, libraries, gymnasium, auditoriums, cafeterias, classrooms, restrooms). Posters should include specific risk factors for the targeted infection, to encourage all persons in the institution to self-screen for infection.
- Persons who self-identify as at-risk for the designated infection are instructed to don surgical mask and should go to campus health services or school nurse office for clinical evaluation.
- Health services personnel who suspect, after initial clinical evaluation, that a patient may have an ERI should immediately consult with DHHS.
- Staff or students traveling to designated high risk areas must register with campus health services or school nurse upon return and report any symptoms of fever or cough that occur during a specified time period. Health services will maintain a list of people under surveillance for this reason.
- Staff and students who have had contact with suspected patients must register with health services and be screened daily for fever or respiratory symptoms.
- Surveillance data will be electronically transmitted to DHHS daily using the form provided by DHHS. This form is currently under development.

C. Infection Control/Precautions

- Airborne, droplet, and contact precautions are required for all contact with any person who has screened as a possible ERI case, until an alternate diagnosis is made.

- Droplet precautions are required for any person who has a new cough and fever, but no risk factors for ERI, until a diagnosis of a non-contagious respiratory illness, or an infection requiring a higher level of precautions, is made. Health services has the authority to exclude any individual with new cough and fever until diagnosis of non-contagious respiratory illness is made.

D. Communication/Education

- A knowledgeable staff member may need to be present at high-traffic areas on site to answer questions and direct persons to evaluation at campus health services as needed.
- The institution should use the mode of communication used most by students, staff, and parents (e-mail, flyers, phone messages) to keep the community informed and to provide education about prevention and symptom surveillance. The institution should also consider creating a designated phone line to campus health services (ERI hotline) for callers with specific questions about ERI.

E. Additional Preparedness Activities

- At Level Orange the Emergency Preparedness team should meet daily to review situation and strategies.

Level Red (ERI plan)/Pandemic period (WHO)

There is evidence of institutional transmission of ERI or there is widespread human-to-human transmission in the region of the institution.

Red indicates the highest level of alert, with restrictions on access to the institution, more active screening, and a shift away from normal operations of the institution. At this level, the institution will consider implementing each of the additional actions.

A. Access Control

- All entrances to the institution will be locked except for the main entrance. Those that cannot be locked will be guarded by security personnel.
- Entry into facility will be restricted to the following:
    - Staff and students with a valid ID
    - Parents of students
- Activities of campus eateries (cafeteria, commercial) and other shops may be suspended.
    - A plan should exist for delivering meals to students if cafeteria or group-style dining is closed. This may take the form of delivery of boxed meals to dormitories.
- There may be some degree of suspension of activities, including sporting events, arts performances, and classes as determined by the Emergency Preparedness team in consultation with DHHS.
- Campus transportation, including buses transporting students on and off campus, may be suspended.
- The decision to close the institution may also be made as a means to prevent the further spread of an epidemic, either by the Emergency Preparedness team or BDCS. In the event of institution closure, a plan should be in place for residential institutions to provide meals to those who cannot leave the institution immediately. There also should be in place a tracking system so that those who leave the area can be tracked.

B. Surveillance, Screening and Triage

- Persons in residential institutions will be instructed to call campus health services if they require any medical appointment. This call is required to screen for new cough developing over the past 10 days. Persons who answer yes will be phone triaged to a health services clinician, who can do further screening for ERI risk factors and determine the need for the patient to be evaluated in person.
- Those allowed into the facility must be screened for fever or cough and have their temperature taken, and if cleared, given something to indicate that they have been cleared to enter the facility (e.g. a sticker, a card, a stamp on their hand).
- Those who are identified to have fever and/or cough will be instructed to don a surgical mask, use waterless hand rub, and go to campus health services or school nurse. Alternatively, in a non-residential institution, they may be excluded from entry into the institution and instructed to call their primary care provider for evaluation. DHHS may elect to gather contact information and follow-up plans made before the person is released into the community.
- In a residential institution, after clinical evaluation, a person who has fever or cough may be allowed to remain at a residential institution if they are a resident unless the person requires further medical evaluation.
- The name and phone number/address of all persons seen with suspected ERI by campus health services will be recorded and reported to DHHS within 24 hours.
- If the person warrants evaluation in a hospital setting, health services staff should alert the referral hospital that a suspect or confirmed case needs evaluation so that the referral center can make arrangements for infection control precautions.

C. Infection Control/Precautions

- An N-95 mask and contact precautions are required for all campus health services medical staff having contact with any person who has fever and/or a new cough, until an alternate diagnosis is made (this includes staff who conduct screening at institution entrances).
- Adequate supplies of personal protective equipment, waterless hand rub, and tissues will be maintained through the institution by a designated group.
- Everyone providing patient care will be N-95 respirator fit-tested.
- If the suspect or confirmed case does not require hospitalization, he/she should be isolated from other community members, including exclusion from events such as sporting events, group meals, working out in the gym, and classes until he/she is proven to not be a case, or he/she has passed the time of infectivity (2 days before illness onset to five days after illness ons*et [this may be modified when more is known about the pandemic strain]*). If the case shares a room with other students in a residential institution, arrangements should be made for the case to be given a private room (for example, to remain in health services in a private patient room or in an empty dorm room). Arrangements should be made to provide the students with necessary daily items, including meals, water, hygiene, and telephone.
- The institution, with guidance from DHHS, will identify close contacts in the institution to a suspect or confirmed case of ERI. Contacts are defined as those who spent >15 minutes within 3 feet of the case during his/her infectious period (2 days before illness onset to five days after illness onset). In a dormitory setting, where contact will be less clearly delineated, contacts are defined as those who meet the above definition or those who live on the same dormitory floor as the case.

- Staff and students who have had contact with suspected patients must register with campus health services and be screened daily for fever or respiratory symptoms
- With guidance from DHHS, recommendations will be made for quarantine of non-ill contacts. Guidance will be provided regarding details of quarantine in a residential institution, including cohorting of contacts, sites to use for quarantine, and legal authority. As with a case in isolation, arrangements should be made to provide those quarantined with necessary daily items, including meals, water, hygiene, and telephone.

D. Communication/Education

- Daily or more frequent updates to community members and parents will be provided as determined by the Emergency Preparedness team.

School Pandemic Influenza Preparedness & Response Plan

This policy has been reviewed and accepted by:

Superintendent of School _____

School Board Representative(s) _____

_____

_____

Principal _____

Vice Principal _____

Local Emergency Management Official(s) _____

_____

_____

School Nurse/Clinician _____

Parent-Teacher Organization Representatives (if applicable) _____

_____

_____

Custodial Services _____

Security (if applicable) _____

Transportation _____

Athletic Director (if applicable) _____

School Pandemic Influenza Preparedness & Response Checklist

Level Ready-Green (ERI alert matrix)/Interpandemic period (WHO)

_____ Form an Emergency Preparedness team, if one does not already exist.

_____ Have Emergency Preparedness team members perform authority/legal preparedness activities

A. Access Control

_____ Develop a plan and a timeline for implementing a policy that enables controlling access to the institution.

_____ Develop a plan to close down or curtail campus transportation, including school buses and campus shuttles if necessary.

B. Surveillance, Screening and Triage

_____ Have the institution's health services personnel screen all individuals at the time of registration at health services or nurse's office, following NH DHHS recommended precautions

_____ Provide patients who have a new cough with a surgical mask and/or tissues

_____ Document data at time of screening and review each week for analysis of trends

_____ Restrict individuals (staff and students) who have fever and a new cough from work, class, or any other group gathering

_____ Send any student or staff home that is suspected of having a communicable disease that puts others in the institution at risk

_____ Report possible clusters to the State's Communicable Disease Control Section by calling (603) 271-4496 M-F 8AM-4:30 PM.

_____ Post informative infection control signs at campus building entrances and common areas

_____ Rotate the infection control signs periodically

_____ Monitor national, regional, and local data related to pandemic influenza

C. Infection control/Precautions

_____ Follow NH DHHS recommended precautions for contact with any individual who has a new cough and fever

_____ Provide mask or tissues to any students, staff or visitors who present with symptoms while at school and awaiting transportation from the facility

_____ Maintain adequate supplies of surgical masks, waterless hand rub, surface disinfectants, and tissues throughout public areas, classrooms, and meeting rooms

_____ Identify who should be N-95 (or other NIOSH-approved) respirator fit-tested personnel

_____ Maintain the appropriate number of trained and N-95 fit-tested staff

_____ Display hand-washing posters (can be downloaded from: http://www.dhhs.nh.gov) in high-traffic areas and classrooms.

D. Communication/Education

_____ Develop a plan for communication and promotion of messages relating to ERI to internal and external audiences

_____ Develop a plan to orient and educate staff regarding basic readiness activities at the institution

_____ Identify translation services needs within student population

_____ Identify behavioral health providers to incorporate into communication plans

E. Additional Preparedness Activities

_____ Implement vaccination campaign (offer vaccine on-site or provide references to area clinics)

_____ Develop educational and promotional materials to promote availability and desirability of influenza vaccine for all

_____ If administering flu vaccine on-site, document administration of vaccine, preferably in a computerized database

_____ Have Emergency Preparedness Team designate an Incident Command core with 24/7 availability to respond to a potential outbreak

_____ Provide regular updates to staff, students, and parents

_____ Have Emergency Preparedness Team meet approximately once a month.

_____ Monitor the Health Alert Network and other communications from public health officials and communicate changes to clinicians

Level Yellow-Orange (ERI plan)/Pandemic Alert Period (WHO)

_____ Continue applicable activities from Level Green/Interpandemic Period

A. Access Control

_____ Review possible need to restrict vendors, visitors, and conferences/group activities

B. Surveillance, Screening and Triage

_____ Consult with DHHS when suspect, after initial clinical evaluation, that a patient may have an ERI

_____ Register staff or students traveling to designated high risk areas and report any symptoms of fever or cough that occur (monitor NH DHHS website for high risk areas, symptoms, and time period for surveillance)

_____ Register staff and students who have had contact with suspected patients and screen daily for fever or respiratory symptoms.

_____ Submit surveillance data electronically to NH DHHS daily using the form provided by DHHS (currently under development)

C. Infection Control/Precautions

_____ Expand precautions for clinicians to include airborne, droplet, and contact precautions for suspect cases with risk factors

_____ *Follow droplet precautions for suspect cases with no risk factors*

D. Communication/Education

_____ Place staff at high-traffic areas to answer questions and direct persons to health services as needed

_____ Keep the community informed and provide education about prevention and symptom surveillance

_____ Consider creating a designated phone line to campus health services

E. Additional Preparedness Activities

_____ Emergency Preparedness team should meet daily to review situation and strategies

Level Red (ERI plan)/Pandemic period (WHO)

_____ Continue applicable activities from Level Green/Interpandemic Period and Level Yellow-Orange/Pandemic Alert Period

A. Access Control

_____ Restrict access to the institution to staff, students, and parents of students

_____ Consider suspension of campus eateries (cafeteria, commercial), shops, and other group activities, including sporting events, arts performances, and classes as determined by the Emergency Preparedness team in consultation with DHHS.

Implement plan for delivering meals to students if cafeteria or group-style dining is closed

_____ Consider suspension of campus transportation (i.e., buses)

_____ Consider closure of the institution

_____ In the event of institution closure of a residential institution, implement plan for to provide meals to those who cannot leave immediately, and track/register those who leave the area

B. Surveillance, Screening and Triage

_____ For residential institutions, instruct symptomatic persons to call ahead to health services clinicians – implement phone triage system

_____ Screen those allowed into the facility for fever or cough and have their temperature taken – implement signage (sticker, card, stamp) system to track status

_____ Record the name and phone number/address of all persons seen with suspected ERI and reported to DHHS within 24 hours unless already alerted that need for notification to DHHS has ceased

C. Infection Control/Precautions

_____ Continue practice of airborne precautions, including staff who conduct screening at institution entrances

_____ Implement isolation & quarantine guidelines as they are made available by NH DHHS

_____ Isolate suspect or confirmed cases if they do not require hospitalization until proven to not be a case, or until passed the time of infectivity

_____ Assist DHHS with contact investigations

D. Communication/Education

_____ Provide daily or more frequent updates to community members and parents

APPENDIX 8: GUIDANCE FOR LONG TERM CARE FACILITIES

Readiness Plan for Epidemic Respiratory Infection
A Guideline for Operations for Use by Long Term Care Facilities, 2005-6

Background: The Readiness Plan for Epidemic Respiratory Infection (ERI) evolved from initial response and planning for the prevention and control of Severe Acute Respiratory Syndrome (SARS), which began in the spring of 2003. During those planning activities it became clear that long term care facilities (LTCFs) need to maintain a level of readiness at all times for a variety of contagious respiratory infections with epidemic potential. Potential threats include SARS, a new strain of influenza that becomes pandemic, and other contagious respiratory infections such as pertussis, parainfluenza, and other pathogens.

Guidelines from state and federal health authorities recommend aggressive implementation of respiratory hygiene practices and universal administration of influenza vaccine to healthcare workers and high-risk patients for all healthcare facilities regardless of the presence of an epidemic.

This document outlines a plan for responding to various levels of threat posed by ERIs, and an approach to stepping up prevention and control activities as the threat increases. It is based on the premises that we should be vigilant at all times for syndromes that may represent contagious respiratory infection, and that we should maintain a group of people prepared to actively respond to changing situations by implementing appropriate parts of this plan, when indicated.

This document serves a guideline for LTCFs. Each facility should modify this guideline to address specific capabilities or factors that relate to the particular facility.

The document is divided into

- A matrix that defines parameters that will be the critical determinants of the level of risk at the LTCF, with the inclusion of the pandemic phases used by the World Health Organization (WHO) to describe worldwide pandemic activity to be used as a reference
- A summary of the elements of the baseline state of readiness that should be maintained at all times
- A summary of the ways in which surveillance, prevention and control activities may need to change as the level of risk to the LTCF increases
- An appendix that includes standard operating procedures for the management of residents who have suspected ERI.

This document is intended for use as a guideline for LTCFs. We recommend the establishment of an Incident Command team/Readiness Committee by the LTCF to determine actions that should be taken to prevent the spread of ERI among residents, staff, volunteers, and visitors. The intent is that this document will be used in the context of advisory documents and guidance provided by NH DHHS and the CDC.

Epidemic Respiratory Infection Alert Matrix and World Health Organization (WHO) Phases
This plan for LTCFs provides recommendations for activities according to the alert matrix system being used in the hospital-developed Epidemic Respiratory Infection (ERI) plan (see Table 2 and process below for further explanation of the ERI plan). Also included, as a reference, are the pandemic phases that have been established by the World Health Organization. The most recent publication of the phases is summarized in Table 1 below.

Table 1. WHO Pandemic Phases

WHO PANDEMIC PHASES
Interpandemic period
Phase 1. No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk[a] of human infection or disease is considered to be low.
Phase 2. No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk[a] of human disease.
Pandemic alert period
Phase 3. Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.
Phase 4. Small cluster(s) with limited human- to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.[b]
Phase 5. Larger cluster(s) but human-to- human spread still localized, suggesting the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).[b]
Pandemic period
Phase 6. Pandemic phase: increased and sustained transmission in general population.[b]
Postpandemic period
Return to phase interpandemic period.

[a] The distinction between *phase 1* and *phase 2* is based on the risk of human infection or disease resulting from circulating strains in animals. The distinction would be based on various factors and their relative importance according to current scientific knowledge. Factors may include: pathogenicity in animals and humans; occurrence in domesticated animals and livestock or only in wildlife; whether the virus is enzootic or epizootic, geographically localized or widespread; other information from the viral genome; and/or other scientific information.

[b] The distinction between *phase 3*, *phase 4* and *phase 5* is based on an assessment of the risk of a pandemic. Various factors and their relative importance according to current scientific knowledge may be considered. Factors may include: rate of transmission; geographical location and spread; severity of illness; presence of genes from human strains (if derived from an animal strain); other information from the viral genome; and/or other scientific information.

Reference: WHO/CDS/CSR/GIP/2005.5: WHO global influenza preparedness plan. World Health Organization, Department of Communicable Disease Surveillance and Response. Global Influenza Programme. 2005.

Epidemic Respiratory Infection ALERT MATRIX

Five levels of alert corresponding to the type of transmission, the location of the cases, and the presence and type of cases at ABC Hospital.

What type of transmission is confirmed?	Where are the cases?	Are there cases at the LTCF?	Alert Level
None or sporadic cases only	Anywhere in the world	No	Ready
Person-to-person transmission	Anywhere outside the US and bordering countries (Canada, Mexico)	No	Green
Person-to-person transmission	In the US, Canada, or Mexico	No	Yellow
Person-to-person transmission	At the LTCF	Yes, with nosocomial transmission, from known sources only	Orange
Person-to-person transmission	At the LTCF	Yes, with nosocomial transmission, sources not clear	Red

The alert level will be determined by the Readiness Committee established by the LTCF, using this matrix and data collected through surveillance activities. It can be upgraded (or downgraded) by this Committee depending on the number of cases, or for other compelling circumstances.

At each level of alert, the Readiness Committee will consider implementing certain actions. As the level of alert becomes higher, additional actions are added to the actions initiated at the lower level.

Level: READY

Baseline activities to ensure preparedness in the absence of known active epidemic of ERI in the world

Goals:

- To prevent cases of vaccine-preventable contagious respiratory infection (e.g. influenza) at the LTCF and in the community
- To promote early detection of initial cases of contagious respiratory infection (including, but not limited to influenza, SARS)
- To prevent nosocomial spread of contagious respiratory infections
- To create systems for real time data collection flexible enough to be adapted for use in an epidemic setting

Influenza vaccination

- For patients and the public
    - Nursing will carry out standing orders for all eligible residents to be offered and receive influenza vaccine.

  See NH state requirement for offering vaccines (SB 0438 , Laws of 2004)
  http://www.gencourt.state.nh.us/legislation/2004/SB0438.html
    - The administering provider of flu vaccine will document administration of influenza vaccine.
- For staff and volunteers
    - Administrative and clinical leaders will promote maximum participation of staff and volunteers in an influenza vaccine program, either on site or in the community.
    - The facility will provide multiple opportunities for staff and volunteers to receive influenza vaccine conveniently and efficiently.

Access Control

- The Security Office or Administration of the LTCF will develop a plan and a timeline for implementing a policy that enables them to control access to the medical center through the use of mandatory ID badges for all staff, volunteers, visitors, and other people coming to the LTCF to work or visit, and a plan to lock down certain entrances and exits, and to monitor use of others, if necessary.

See NH state Requirement for name tag identification , Section 151:3-b
http://www.gencourt.state.nh.us/rsa/html/XI/151/151-3-b.htm

Surveillance, Screening and Triage

- For residents
    - Clinical staff will
        - Evaluate residents who have a new cough for fever.
        - Place all residents who have fever and a new cough on droplet precautions, pending further evaluation.
    - The admitting clinical staff will screen all residents at the time of admission for “fever and cough” and will
        - Admit residents with fever and cough to private room or shared room that can be separated by a curtain with droplet precautions.
        - Document data at time of screening and transmit resident admitting diagnoses to Infection Control Practitioner daily for review of appropriate use of precautions for patients.

- For staff and volunteers
    - Clinical and administrative leaders will advise staff and volunteers who have fever and a new cough not to come to work.
- For visitors
    - LTCF will maintain "Ask for a Mask" signs at all entrances to encourage all persons entering the LTCF to self-screen (rotating the posters periodically to maintain impact).
    - Via posters, persons who have new cough will be advised to wear a surgical mask or use tissues to cover their mouth and nose when coughing, and to use good hand hygiene during the time they need to be at the LTCF.
    - All staff will advise persons who have fever and cough to defer visiting the LTCF until their illness has resolved.
- Monitoring surveillance data
    - The Infection Control Practitioner will monitor national, regional, and local data related to ERI and report changing trends to the Readiness Committee on a regular basis.

Infection control/Precautions

- All staff, volunteers, and visitors will use ***Droplet Precautions (private room or shared room separated by curtain and surgical mask within 3 feet of patient)*** for all contact with any resident who has a new cough and fever, until a diagnosis of a non-contagious respiratory illness, or an infection requiring a higher level of precautions, is made.
- All staff, volunteers, and visitors will use ***Droplet Precautions (private room or shared room separated by curtain and surgical mask within 3 feet of patient)*** for all contact with any resident being admitted to the LTCF who has a new cough and fever until a diagnosis of a non-contagious respiratory illness, or an infection requiring a higher level of precautions, is made.
- Staff will use a visible doorway "precautions sign" system to allow persons entering the room to know what type of protective equipment is needed.
- Administrative services and Housekeeping will maintain adequate supplies at all times of surgical masks, waterless hand rub, and tissues throughout public areas.
- Each director is responsible for maintaining the appropriate number of N-95 respirator-trained and fit-tested staff.

Communication/Education

- The LTCF will develop a sustainable and effective plan for communication and promotion of messages relating to ERI to internal and external audiences.
- The Readiness Committee will develop an internal communication plan to allow immediate access to predefined groups of people, including "on call" staff, via email, intranet, paging system, or telephone.

Additional Preparedness Activities

- The Readiness Committee will meet approximately once a month.
- The Readiness Committee will designate an Incident Command core team including senior administration, infection control, communications, nursing, safety, engineering, security, with 7-day a week availability to respond to a potential outbreak of contagious respiratory infection.
- The Infection Control Practitioner will monitor the Health Alert Network and other communications from public health officials to review changes in recommendations from NH DHHS and CDC about screening criteria and will communicate changes to clinicians via some combination of email, intranet, or radiographic or laboratory reporting.

Level: GREEN

Confirmed efficient human-to-human transmission of potentially epidemic contagious respiratory infection present outside the US and bordering countries (Canada and Mexico)

Summary: At the "GREEN" level, our basic activities remain similar to the "READY" level, except that there may be more focused surveillance and screening based on specific geographic and epidemiologic risk factors, and more aggressive forms of isolation may be required for suspected cases. Vigilance of all staff is required to identify potential cases of ERI remains critical. At the GREEN level, the following additional actions will be considered for implementation by the Readiness Committee.

Access Control

- The Readiness Committee will consider the need to activate the policy on requiring staff, volunteers, and visitors to wear identification while in the LTCF.

Surveillance, screening and triage

- "Ask for a Mask" signs will be placed at all entrances, which may be modified to include specific risk factors for a specific ERI, to encourage all persons entering the LTCF to self-screen.
- Persons who self-identify as at risk for the designated infection are instructed to don surgical mask and may be asked to leave the facility to seek evaluation from a health care provider.
- Clinicians will evaluate any resident with new cough and fever.
- Clinicians who suspect, after initial clinical evaluation, that a resident or non-resident (staff or volunteer) may have an ERI should immediately consult with the Infection Control Practitioner, who will involve the state health department as appropriate. **(IF A RESIDENT IS DETERMINED TO BE A SUSPECT CASE OF ERI, GO TO LEVEL: ORANGE)**
- No resident can be admitted to the LTCF with a suspected diagnosis of the ERI in question, without the approval of the Infection Control Practitioner.
- Staff and volunteers traveling to designated high risk areas must register with the Infection Control Practitioner upon return and report any symptoms of fever or cough that occur during a specified time period. The Infection Control Practitioner will maintain a list of people under surveillance for this reason.

Infection control/Precautions

- Airborne, droplet, and contact precautions are required for all contact with any resident who has screened as a possible ERI case, until an alternate diagnosis is made.
- A resident with possible ERI and risk factors for ERI should be placed in a private room or in a negative pressure room if the LTCF has this capability, until an alternate diagnosis is made.
- Droplet precautions are required for all contact with any resident who has a new cough and fever, but no risk factors for the ERI, until a diagnosis of a non-contagious respiratory illness, or an infection requiring a higher level of precautions, is made.

Communication/Education

- At each committee meeting, the Readiness Committee will review the need for communication with, or educational programs for staff, volunteers, residents, and the public.

Preparedness

- The Readiness Committee meets once or twice a month, depending on the stability of the situation.

Level: YELLOW

Confirmed human-to-human transmission of potentially epidemic contagious respiratory infection documented in the US or bordering countries (Canada or Mexico)

Summary: At the "YELLOW" level, the ERI is closer to home, and may pose a more real threat. Vigilance of all to identify potential cases of ERI remains critical. At the YELLOW alert level, rapid changes in the epidemiology of disease, and increase in the level of threat to LTCF may be expected. The major change is that the Readiness Committee becomes more active so that a rapid change to a higher level of alert is possible. The following additional activities will be considered.

Access Control

- Review need to require staff, volunteers, and visitors to wear ID badges at all times.

Surveillance, screening and triage

- Continued use of posters to promote screening for staff, volunteers, and visitors.

Infection control/Precautions

- No changes

Communication/Education

- No changes

Preparedness

- The Readiness Committee meets at least once a week to review surveillance data and new recommendations from NH DHHS and CDC.

Level: ORANGE

There is evidence of nosocomial transmission of ERI from known infected residents to other residents, employees, or visitors at the LTCF, OR there is human-to-human transmission in the region.

Summary: "ORANGE" indicates a high level of alert, with restrictions on access to the LTCF, much more active screening, and a shift away from normal operations throughout the facility. At the ORANGE level, the Readiness Committee will consider implementing each of the following additional actions.

Access Control

- All entrances to the LTCF will be locked except the Main Entrance.
- Any open entrances should be monitored.
- Entry into facility will be restricted to the following:
    - Staff with valid ID
    - Family members of residents
- Those allowed into the facility must be screened for fever or cough (**see Surveillance, screening and triage** below) and have their temperature taken and if cleared, given something to indicate that they have been cleared to enter the facility (e.g., a sticker, a card, a stamp on their hand). Monitoring can be performed by any staff determined to be capable of performing screening, and taking temperatures.
- Activities in common areas, such as group meals and social events, will be suspended.
- Volunteer activities and education programs, except those related to the epidemic disease will be suspended.
- There will be some degree of suspension of admissions as determined by the Readiness Committee.
- There will be some level of suspension of non-urgent construction and other non-essential activities as determined by the Readiness Committee.

Surveillance, screening and triage

- All people entering the LTCF will be actively screened by trained staff for cough or fever at open entrances
    - Visitors who are identified to have fever and/or cough will be instructed to don surgical mask, leave the facility, and seek evaluation from their health care provider (NB: risk factors at this alert level may be simply living in an affected region)
    - Employees who have fever and/or cough will be considered possible cases
        - If at home, they should call their health care provider for evaluation prior to coming to work.
        - If at work, they should contact the Infection Control Practitioner and be instructed regarding the need for evaluation.
        - The Infection Control Practitioner screen employees regarding need for evaluation, need for home isolation, etc.
    - After evaluation, no employee who has fever or cough will be allowed to remain at the LTCF.
        - The name and phone number/address of all employees sent home with suspected epidemic infection should be recorded and reported to NH DHHS.
- The Infection Control Practitioner will continue to maintain a log of which employees have contact with epidemic residents, whether there are unprotected exposures, and the employee's health and work status daily.

Infection control/Precautions

- An N-95 mask and contact precautions are required for all HCWs having contact with any resident who has fever and/or a new cough, until an alternate diagnosis is made. (This includes staff that conducts screening at the LTCF entrances.)
- A resident with suspected ERI should be placed in a private room, or in a negative-pressure room if the LTCF has this capability, until an alternate diagnosis is made.
- Adequate supplies of personal protective equipment, waterless hand rub, and tissues will be maintained throughout the LTCF.
- Everyone providing resident care will be N-95 respirator fit-tested.

Communication/Education

- Daily or more frequent updates to staff and the public/press will be provided as determined by the Readiness Committee.

Preparedness

- The Readiness Committee will meet twice daily to review infection control surveillance data, LTCF operations (i.e. number of screening evaluations being done) and adequacy of new controls and revise alert level as needed.
- Staff may be redeployed from areas where clinical activities have been suspended or limited to screening, infection control, epidemic resident care and other areas of need, as determined by Readiness Committee.

Level: RED

There is evidence of untraceable or uncontrolled nosocomial transmission of ERI in the facility OR there is widespread human-to-human transmission in the region

Summary: "RED" indicates the highest level of alert, with extreme restrictions on access to the LTCF and a major shift away from normal operations throughout the facility. The following additional actions will be considered.

Access Control

- All entrances to the LTCF will be locked except one entrance designated for employees.
- All open entrances will be monitored.
- Entry into facility will be restricted to the following:
    - Employee with valid ID
- Those allowed into the facility must be screened for cough and other criteria (as outlined in ORANGE) and have their temperature taken and if cleared, given something to indicate that they have been cleared to enter the facility.
- Suspension of admissions as determined by the Readiness Committee.
- Suspension of on-site volunteer, construction activities.

Surveillance, screening and triage

- Required daily for all persons entering facility (see ORANGE).

Infection control/Precautions

- All staff will wear surgical masks and use frequent hand hygiene at all times while in the facility.

Communication/Education

- There will be daily or more frequent updates to staff as determined by the Readiness Committee.

Preparedness

- The Readiness Committee will meet twice daily to review situation.
- Staff may be redeployed from areas where clinical activities have been suspended or limited to screening, infection control, epidemic resident care and other areas of need, as determined by Readiness Committee.

APPENDIX 1

SUSPECTED OR CONFIRMED EPIDEMIC RESPIRATORY INFECTIONS (ERI) RESIDENT MANAGEMENT PROTOCOL

This plan will be put into effect when a resident is believed to meet the criteria for an epidemic respiratory infection but does not require hospitalization.

Principles to follow in care of ERI patient.

- Minimize Health Care Workers (HCW) contact with the resident.
- Protect HCWs during contact with resident.
- Minimize opportunities for exposure to other residents or visitors.

CRITERIA FOR HOSPITAL TRANSFER

- Resident will be transferred to a hospital only when medically necessary.
- Residents will not be admitted solely for the purpose of isolation.

If the number of ERI residents exceeds the number of available private rooms in the LTCF, residents with known ERI can be cohorted together. The following residents will be given priority for the rooms; these decisions will be made in collaboration with the Readiness Committee.

- ERI residents who are known to have transmitted ERI to others
- Residents who are being assessed for ERI (do not want to put someone who does not ultimately have ERI in with known ERI residents)

RESIDENT TRANSPORT

Guidelines for moving ERI residents in the LTCF

- The nurse caring for the resident will transport the resident with the assistance of transportation personnel as needed.
- If an elevator is needed, use a service elevator and be sure there are no other people in it.
- The resident must wear a surgical mask over their nose and mouth during transport through the facility
- Security can help with providing an empty elevator available and other logistics if needed.
- Employees who are transporting the resident should wear gloves, N-95 mask (or PAPR hood and motor unit), goggles, and gown.

PROTECTIVE EQUIPMENT

Anyone entering the ERI resident's room must wear respiratory protection appropriate to the disease. If the disease is transmitted via the airborne route then the following is required

- N95 mask (employee must have been fitted and trained by LTCF) and goggles (face shields are not felt to provide adequate protection).
- If the employee cannot be fitted for an N95 mask they must wear a PAPR unit when entering the room. (People wearing a PAPR hood do not need goggles; the hood provides protection for the eyes)
- Everyone must wear gloves and a gown.

When leaving the room the PPE will be removed in the anteroom, if there is one, or just outside the door if the room does not have an anteroom. Remove PPE in the following order.

- Untie the gown's waist tie
- Remove gloves and dispose of them in trash
- Remove goggles handling them by the side pieces and place in sink
- Remove mask handling it by the head straps and dispose of in trash

- Untie neck ties of gown and carefully remove gown turning sleeves inside out as arms are pulled out, place gown in linen bag
- Put new gloves on and disinfect goggles with alcohol or Dimension III
- Remove gloves and dispose
- WASH HANDS before doing anything else

People who have used a PAPR unit should remove PPE in the following order

- Remove hood and motor unit and place on chux pad
- Remove gloves, dispose of in trash and put new gloves on, clean hood, hose and motor with Dimension III, place unit in clean area and dispose of chux pad
- Untie the gown's waist tie
- Remove gloves and dispose of then in trash
- Untie neckties of gown and carefully remove gown, turning sleeves inside out as arms are pulled out, place gown in linen bag.
- WASH HANDS before doing anything else.

All of the PPE, except for the PAPR units, are either disposable or single use and should not be re-used.

N95 masks will not be reused. They will be disposed in the trash of as soon as they are removed.

PAPR units must be disinfected as soon as they are removed. The person who used the equipment is responsible for cleaning it and plugging in the motor unit to recharge while it is not in use. The hood and hose must be wiped with a disinfectant before being handled and used again. The motor unit should be wiped with a disinfectant if it has been in contact with respiratory secretions.

ROOM SETUP

The door to the room must be kept closed.

Only essential equipment should be in the room. Equipment brought into the room should be left in the room for use only by that patient. Thermometer, stethoscope glucometer, pulse ox, should remain in the room. Equipment that cannot be left in the room must be disinfected before it is used for any other resident.

Linen requires no special precautions. Used linen should be handled as little as possible. It should be carefully rolled together in a manner that avoids shaking, and placed in the yellow linen bags.

Trash requires no special precautions. Routine waste should be placed in the regular trash bags. Any waste that is saturated with blood or body fluids should be disposed of in biohazard bags.

Regular dishes will be used. The dietary aide will give the tray to the nurse who will bring it into the room. The nurse will also bring the tray out of the room when the meal is finished.

Blood and other specimens may be sent to the lab via normal mechanisms. Be sure the out side of the biohazard bag does not become contaminated.

The ERI resident room should be cleaned daily and as needed by housekeeping. While the resident is in the room the housekeeping staff must wear N95 mask and goggles or a PAPR unit and gloves and gowns while in the room. Routine cleaning with a disinfectant is adequate. If the resident permanently vacates the room, it should be left closed for an hour, then people may enter without masks to clean.

STAFFING
The nurse taking care of an ERI resident will not care for any other residents or will care for other residents with confirmed ERI of the same strain. Other staff members such as LNAs who may be needed to assist with care may care for other patients.

The goal is to limit the number of employees who enter the room while providing appropriate safe care for the resident.

All employees will be expected to participate in the care of ERI residents as needed.

Pregnant employees will not be excused from caring for ERI residents.

A resident shower may be designated for use by staff who have cared for a ERI resident to shower before leaving work.

EMPLOYEE SURVEILLANCE
A list of all employees who enter the room or have had close contact with the ERI resident will be started by the Infection Control Practitioner as soon as the ERI plan is activated and maintained by the nurse who is assigned to the patient. All employees entering the room or who have contact with the ERI resident must add their name and contact information to the list. The unit secretary or charge nurse will FAX the prior day's list to Infection Control Practitioner at a designated time each day. These employees will be followed by Infection Control Practitioner for symptoms of the disease. Infection Control Practitioner/Readiness Committee will develop a disease specific protocol for close monitoring of all employees who have had contact with the ERI resident.

VISITORS
No visitors. People can talk to the resident via telephone.

SPECIAL SITUATIONS
Cough inducing or aerosol producing procedures (intubation, sputum induction, nebulizer treatment, CPAP, BiPAP, suctioning) should not be done unless absolutely necessary. If they must be done the resident should be medicated if possible to limit aerosol production (sedate, paralyze). The absolute minimum number of employees should be in the room. Employees who are in the room during such a procedure must wear PAPR units.

In the event of cardiopulmonary arrest all participants in the resuscitation efforts must all be wearing appropriate PPE; PAPR unit, gloves and gown. Equipment and supplies must go in only one direction (equipment and supplies that are taken off the code cart are not put back on the cart).

COHORTING OF PATIENTS AND STAFF
If there is significant ERI transmission in the facility or frequent unprotected exposures then residents and staff may need to be cohorted in separate areas of the facility according to their exposure status;

- No exposure
- Unprotected exposure but no symptoms
- Unprotected exposure with symptoms but do not meet the ERI case definition
- Symptoms meet the ERI case definition

This policy has been reviewed and accepted by

Infection Control Practitioner _____

Administration _____

Readiness Committee_____

Nursing Director _____

Housekeeping Department _____

Engineering _____

Respiratory Therapy _____

Security _____

Risk Management _____

STATE OF NEW HAMPSHIRE
DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH SERVICES

29 HAZEN DRIVE, CONCORD, NH 03301-6504
603-271-4482 1-800-852-3345 Ext. 4482
Fax: 603-271-3850 TDD Access: 1-800-735-2964

John A. Stephen
Commissioner

Mary Ann Cooney
Director

Guidance for Correctional Facilities: Pandemic Influenza Preparedness & Response

I. Background

Influenza, commonly called "the flu," is caused by the influenza virus, which infects the respiratory tract (nose, throat, lungs). The flu usually spreads from person to person when an infected person coughs, sneezes, or talks and the virus is sent into the air. The flu can cause illness in all ages, and it is more likely than other viral respiratory infections, such as the common cold, to cause severe illness and life-threatening complications

Avian influenza, also known as "avian flu" or "bird flu," is caused by one of many viruses that exist naturally in wild birds. Wild birds usually do not become sick, but they can carry the virus and pass it on to non-wild birds, such as chickens, turkeys, and ducks (fowl), which can become very sick and die. Flu viruses can exist not only in birds, but also other animals. Bird flu viruses do not generally infect people. However, since 1997, there have been over 160 reported cases of human infection from avian influenza A H5N1 (the scientific name for a strain of bird flu currently circulating) in Asia and parts of Eastern Europe. Humans can become infected with bird flu through contact with infected poultry or contaminated fluids, such as the birds' saliva, nasal secretions, and feces.

Because all influenza viruses have the ability to change, scientists are concerned that viruses including but not limited to the influenza A H5N1 virus could change so that it can easily spread from sick people to otherwise healthy people. If this happens, and the influenza spreads around the world, it would be called a pandemic. Pandemic influenza is a unique public health emergency. Outbreaks are expected to occur simultaneously throughout much of the country and in the State, preventing shifts in human and material resources that normally occur in most other natural disasters. For this reason, the State of New Hampshire Department of Health and Human Services (NH DHHS) recommends that institutions, such as correctional facilities, plan now for their response to pandemic influenza.

II. Purpose

The purpose of this document is to assist correctional facilities in their development of institution-specific pandemic influenza preparedness and response plans. This document outlines a plan for responding to various levels of threat that may be posed by pandemic influenza, and an approach to stepping up prevention and control activities as the threat increases. The intent is that this document will be used in the context of advisory documents and guidance provided by New Hampshire (NH) Department of Health and Human Services (DHHS) and the Centers for Disease Control and Prevention (CDC). This guidance is a fluid document subject to change as new information becomes available.

Assumptions

The development of this document is based on the following assumptions:

- In the event of an influenza pandemic the State will have minimal resources available for on-site local assistance, and therefore local authorities and institutions will be responsible for community-specific pandemic response plans, including the modification of this document so that it is institution-specific.
- Local communities may have emergency preparedness plans or influenza pandemic plans in place. Local community leaders and institutions will communicate so that each is aware of the others' plans.
- The federal government has limited resources allocated for State and local plan implementation, and therefore the State will provide supplementary resources in the event of a pandemic, which may include the redirection of personnel and monetary resources from other programs.
- The federal government has assumed the responsibility for developing materials and guidelines, including basic communication materials for the general public on influenza, influenza vaccine, antiviral agents, and other relevant topics in various languages; information and guidelines for health care providers; and training modules. Until these materials are developed, the State has the responsibility to develop such materials for its citizens.
- A novel influenza virus strain will likely emerge in a country other than the United States, but could emerge first in the United States and possibly in New Hampshire.
- It is highly likely that moderate or severe shortages of vaccine will exist early in the course of the pandemic and also possible that no vaccine will be available.
- The supply of antiviral medications used for prevention and treatment of influenza will be limited.

World Health Organization (WHO) Phases

The pandemic phases described in this document are those that have been established by the World Health Organization. The most recent publication of the phases is summarized in Table 1 below. The State's response to a pandemic will be guided by the WHO phase declaration [see *State of New Hampshire Influenza Pandemic Public Health Preparedness & Response Plan* (currently in draft form)]; current phase status can be found at http://www.who.int/csr/disease/avian_influenza/phase/en/index.html . This response will include specific considerations during each phase of the pandemic regarding surveillance, vaccine delivery, administration of antivirals, and communications. In addition, there must be actions taken on the local level in each phase, particularly with respect to community-based containment measures. This plan for correctional facilities provides recommendations for activities in response to WHO phases and also notes the corresponding alert matrix system being used in the hospital-developed *Epidemic Respiratory Infection (ERI) plan* (see Table 2 and process below for further explanation of the ERI plan). It should be noted that at the time of writing this document (February 2006), we are in WHO Phase 3.

Table 1. WHO Pandemic Phases

Interpandemic period
Phase 1. Present in animals, low risk to humans
Phase 2. Present in animals, higher risk of human disease
Pandemic alert period
Phase 3 Human infection present, but no or very limited human-to-human spread
Phase 4 Evidence of increased human- to-human transmission, but still limited
Phase 5 Evidence of significant human-to-human transmission (substantial pandemic risk).
Pandemic period
Phase 6 Evidence of sustained transmission in general population.
Postpandemic Period

Based on WHO/CDS/CSR/GIP/2005.5: WHO global influenza preparedness plan. World Health Organization, Department of Communicable Disease Surveillance and Response. Global Influenza Programme. 2005.

Table 2. Epidemic Respiratory Infection (ERI) Alert Matrix
Five levels of alert corresponding to the type of transmission and the location of the cases.

What type of transmission is confirmed?	Where are the cases?	Are there cases at the facility?	Alert Level
None or sporadic cases only	Anywhere in the world	No	Ready
Efficient person-to-person transmission	Anywhere outside the US and bordering countries (Canada, Mexico)	No	Green
Efficient person-to-person transmission	In the US, Canada, or Mexico	No	Yellow
Efficient person-to-person transmission	In NH or bordering states; at correctional facility	Doesn't matter; efficient transmission from known sources	Orange
Efficient person-to-person transmission	At correctional facility	Yes, with efficient transmission, sources not clear	Red

III. Process

The first New Hampshire Influenza Pandemic Preparedness Plan was completed in 2001 and was modeled on the CDC guidance, *Pandemic Influenza: Planning Guide for State and Local Officials*, Version 2.1, January 1999. As the State's plan changed and progressed, it became clear that correctional facilities require specific attention to issues such as surveillance, infection control, and case management. Therefore, this guidance was adapted from both the current

State of NH Influenza Pandemic Public Health Preparedness & Response Plan (currently in draft form) and the *Readiness Plan for Epidemic Respiratory Infection (ERI)*, the latter of which is now used by multiple hospitals throughout the State. The ERI plan was developed by the DHMC Emergency Preparedness team and was disseminated in 2005. It establishes a user-friendly alert matrix distinctive to respiratory infection outbreaks, which may be applicable in the event of an influenza pandemic.

This guidance has been developed by the Division of Public Health Service's Communicable Disease Control Section (CDCS).

IV. Authority/Legal Preparedness

The State of NH has designated DHHS to oversee the influenza pandemic planning process in cooperation with local health agencies and other partners. During a pandemic, DHHS will have primary responsibility for:

- Making recommendations to local health departments, health care providers and facilities, and the general public to aid in controlling the spread of influenza
- Maintaining surveillance systems to monitor the spread of disease
- Keeping the public informed

While no provision of law addresses pandemic influenza specifically, numerous statutory provisions authorize relevant actions. For institutions to effectively plan and respond to an influenza pandemic, they should be knowledgeable of the following legal issues:

- NH's laws and procedures on quarantine, isolation, closing premises, and suspending public meetings, which can be implemented to help control an epidemic
- Statutes for mandatory vaccination during an infectious disease emergency
- Medical volunteer licensure, liability, and compensation laws for in-state, out-of-state, and returning retired and non-medical volunteers
- Workers' compensation laws as they apply to health care workers and other essential workers who have taken antivirals for prophylaxis

The corresponding statute descriptions are summarized in the *State of NH Public Health Emergency Preparedness Plan* (currently in draft form).

V. Response Activities by Level of Alertness

Level Ready-Green (ERI alert matrix)/Interpandemic period (WHO)

When cases of an Epidemic Respiratory Infection (ERI) are occurring in countries other than the U.S., but have yet to be reported domestically or in neighboring countries, your facility should maintain a level of preparedness in the event that the ERI begins to spread globally. This is the level your facility should be maintaining currently. During this level, we recommend your facility take the actions listed below.

We recommend the establishment of an Incident Command (IC) Team/Readiness Committee by the correctional facility to determine actions that should be taken to prevent the spread of pandemic influenza among staff, inmates, volunteers, and visitors.

A. Access Control

- The facility's IC Team/Readiness Committee will develop a plan and a timeline for implementing a policy that enables them to maintain control of access to the facility. If possible, consideration should be made to use mandatory ID badges for all staff, inmates, vendors, and other people coming to the facility. There should be a plan to lock down certain entrances and exits, and to monitor use of others, as applicable.

B. Surveillance, Screening and Triage

- The facility's health services personnel will screen all individuals at the time of registration at health services or nurse's office. Personnel may ask the following question: "Do you have a new cough that has developed over the last 10 days?" and will
    - Provide individuals who have a new cough with a surgical mask and/or tissues.
    - Document data at time of screening and review each week for analysis of trends.
    - Clinical staff will
        - Evaluate individuals who have a new cough for fever (temperature ≥100.4^{o}F).
        - Place all individuals who have fever and a new cough on droplet precautions, pending further evaluation.
    - If private rooms are available, and evaluation requires isolation, individuals with fever and cough will be placed in a private room with droplet precautions. Otherwise, such individuals should be referred to local community health providers or hospitals for evaluation, with health services personnel calling ahead to alert staff of patient symptoms.
- The facility's health services staff has the authority to restrict individuals (staff and inmates) who have fever and a new cough from work or any other group gathering. They also have the authority to send any staff member home that they suspect may have a communicable disease that puts others in the institution at risk.
- Health services clinicians will screen individuals who report pneumonia or respiratory infection to identify possible clusters, or groups of ill individuals who may be linked.
    - Possible clusters will be reported to the State's Communicable Disease Control Section by calling (603) 271-4496 M-F 8AM-4:30 PM. Clusters may be defined as two or more clinically compatible individuals with onset of symptoms $\leq$ 10 days apart (this may be altered as more information about the pandemic influenza strain becomes available; NH DHHS will follow CDC recommendations as they are released).
- "Ask for a Mask" signs will be placed at all building entrances and common areas to encourage all persons entering to self-screen (rotating the posters periodically to maintain impact).
    - Via posters, staff will ask persons who have a new cough to wear a surgical mask or use tissues to cover their mouth and nose when coughing, and to use good hand hygiene.
    - The facility will advise all persons, including staff and visitors, who have fever and cough to defer visiting the institution until their illness has resolved.
- Monitoring surveillance data

- The health services personnel will monitor national, regional, and local data related to the ERI. Information will be posted on the NH DHHS website.

C. Infection control/Precautions

- All staff, inmates, and visitors will use ***Droplet Precautions (private room and surgical mask within 3 feet of ill individual)*** for all contact with any individual who has a new cough and fever, until a diagnosis of a non-contagious respiratory illness, or an infection requiring a higher level of precautions, is made.
- The facility's health services staff will use or provide for use a visible doorway "precautions sign" system to allow persons entering the room to know what type of protective equipment is needed.
- The facility will maintain adequate supplies at all times of surgical masks, waterless hand rub, and tissues throughout public areas as well as within Health Services.
- If possible, the institution will identify key areas throughout the campus which need to maintain core groups of N-95 respirator [or other National Institute of Occupational Safety & Health (NIOSH)-approved filtering facepiece respirator] fit-tested personnel
  - Each director is responsible for maintaining the appropriate number of trained and fit-tested staff
  - For a list of other NIOSH-approved respirators, see http://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/
- The facility will display hand-washing posters (can be downloaded from: http://www.dhhs.nh.gov) in high-traffic areas.

D. Communication/Education

- The facility will develop a sustainable and effective plan for communication and promotion of messages relating to the ERI to internal and external audiences.
- A sustainable plan should be developed to orient and educate staff regarding basic readiness activities at the facility, and a strategy for activities to provide timely information to health services providers in the event of an ERI.
- The institution should incorporate behavioral health providers in their communication plans to address the emotional needs of staff and inmates in the event of a pandemic threat or actual event that causes serious illness or death. For more information about the Disaster Behavioral Health Response teams in the State of NH, disaster behavioral health training, or would like to receive educational materials, please contact the Disaster Behavioral Health Coordinator at (603) 271-2231 or (800) 852-3792.

E. Additional Preparedness Activities

- If the facility does not have an existing Emergency Preparedness team (IC Team/Readiness Committee), one should be formed following Incident Command Structure (ICS). If additional training and/or help is needed in creating this team with adherence to ICS, please contact the NH Bureau of Emergency Management at (800)852-3792 or (603)271-2231.

- The team will designate an Incident Command core including senior administration, health services, communications, safety, engineering, and security with 7-day a week availability to respond to a potential outbreak of an ERI.
- The team will be in charge of regular updates to staff and inmates. The team should meet approximately once a month.
- The Emergency Preparedness team will monitor the Health Alert Network and other communications from public health officials to review changes in recommendations about screening criteria and will communicate changes to clinicians via some combination of email, intranet, or radiographic or laboratory reporting.

The following recommendations for vaccination campaigns apply to the regular influenza season. This is separate from vaccination campaigns that may take place during a pandemic. The purpose in the following recommendations for influenza vaccination during the regular influenza season is: to reduce morbidity from seasonal influenza transmission in vital workers if pandemic strain emerges; to reduce diagnostic confusion if a pandemic strain emerges (one may have a higher suspicion for pandemic strain if the patient is known to have been vaccinated against seasonal influenza); and to prepare communities for providing vaccination clinics in the event that vaccination for a pandemic strain is necessary.

- Offer all eligible staff, inmates, and visitors the opportunity to receive influenza vaccine on-site. This may be facilitated by holding vaccination clinics on designated days.
- If your facility cannot hold clinics on-site, refer to local clinics or collaborate with community health organizations to hold clinics to provide influenza vaccine to all eligible institution members of any age.
- Develop educational and promotional materials to promote availability and desirability of influenza vaccine for all.
- The administering provider of flu vaccine will document administration of influenza vaccine, preferably in a computerized database.
- Administrative, educational, and clinical leaders will promote maximum participation of staff and inmates in influenza vaccine program.
- Facility health services personnel will provide multiple opportunities for staff and inmates to receive influenza vaccine conveniently and efficiently.

Level Yellow-Orange (ERI plan)/Pandemic Alert Period (WHO)

In the event that a case of Epidemic Respiratory Infection (ERI) affects a community member or a close contact of a community member of your institution, activities will be modified to reflect increased risk of exposure and disease spread within your community. The following are recommendations regarding activities of your facility that should be addressed in the event that a case of ERI is suspected or has been confirmed in your facility, but there is no documented community spread from this person to others. For example, this would include an inmate who was admitted to the facility with cough and fever after travel to an area known to have the ERI, but has not spread the illness to anyone else.

A. Access Control

- If possible in your institution, require staff, inmates, and visitors to wear ID badges/visitors passes at all times.
- Review possible need to restrict vendors, visitors, and conferences/group activities.

B. Surveillance, Screening and Triage

- "Ask for a mask" signs are posted at all entrances, and in all common areas. Posters should include specific risk factors for the targeted infection, to encourage all persons in the facility to self-screen for infection.
- Persons who self-identify as at-risk for the designated infection are instructed to don surgical mask and should go to the facility's health services office for clinical evaluation.
- Health services personnel who suspect, after initial clinical evaluation, that an individual may have an ERI should immediately consult with DHHS.
- Staff traveling to designated high risk areas, or inmates who recently (time to be defined for corresponding incubation period of disease) traveled to a high risk area must register with the facility's health services and report any symptoms of fever or cough that occur during a specified time period. Health services will maintain a list of people under surveillance for this reason.
- Staff and inmates who have had contact with suspected patients must register with health services and be screened daily for fever or respiratory symptoms.
- Surveillance data will be transmitted to DHHS daily using the electronic surveillance form provided by DHHS. This form is currently under development.

C. Infection Control/Precautions

- Airborne, droplet, and contact precautions are required for all contact with any person who has screened as a possible ERI case, until an alternate diagnosis is made.
- Droplet precautions are required for any person who has a new cough and fever, but no risk factors for the ERI, until a diagnosis of a non-contagious respiratory illness, or an infection requiring a higher level of precautions, is made. Health services has the authority to exclude any individual with new cough and fever until diagnosis of non-contagious respiratory illness is made.

D. Communication/Education

- A knowledgeable staff member may need to be present at high-traffic areas on site to answer questions and direct persons to evaluation at health services as needed.
- The facility should use the mode of communication used most by staff and inmates to keep the facility's community informed and to provide education about prevention and symptom surveillance.

E. Preparedness

- At level "Orange" the Emergency Preparedness team should meet daily to review situation and strategies.

Level Red (ERI plan)/Pandemic period (WHO)

There is evidence of institutional transmission of the ERI or there is widespread human-to-human transmission in the region of the facility.

Red indicates the highest level of alert, with restrictions on access to the institution, more active screening, and a shift away from normal operations of the institution. At this level, the facility will consider implementing each of the additional actions.

A. Access Control

- All entrances to the institution will be locked except for the main entrance. Those that cannot be locked will be guarded by security personnel.
- Entry into facility will be restricted to the following:
    - Staff with a valid ID
    - Family members of inmates
- Activities of facility eateries may be suspended.
    - A plan should exist for delivering meals to inmates if cafeteria or group-style dining is closed.
- There may be some degree of suspension of group activities as determined by the Emergency Preparedness team in consultation with DHHS.
- The decision to close the institution to further admissions may also be made as a means to prevent the further spread of an epidemic, either by the Emergency Preparedness team or DHHS.

B. Surveillance, Screening and Triage

- Inmates and staff will be instructed to inform health services if they require any medical appointment. This is required to screen for new cough developing over the past 10 days. Persons who answer yes will be triaged to a clinician who can do further screening for ERI risk factors and determine the need for the individual to be evaluated further.
- Those allowed into the facility must be screened for fever or cough and have their temperature taken, and if cleared, given something to indicate that they have been cleared to enter the facility (e.g. a sticker, a card, a stamp on their hand).
- Those who are identified to have fever and/or cough will be instructed to don a surgical mask, use waterless hand rub, and go to health services. Contact information will be gathered and DHHS will be alerted with any follow-up plans.
- The name and contact information of all persons seen with the suspected ERI by health services will be recorded and reported to DHHS within 24 hours.
- If the person warrants evaluation in a hospital setting, health services staff should alert the referral hospital that a suspect or confirmed case needs evaluation so that the referral center can make arrangements for infection control precautions.

C. Infection Control/Precautions

- An N-95 mask and contact precautions are required for all health services medical staff having contact with any person who has fever and/or a new cough, until an alternate diagnosis is made (this includes staff who conduct screening at facility entrances).
- Adequate supplies of personal protective equipment, waterless hand rub, and tissues will be maintained through the facility by a designated group.
- Everyone providing patient care will be N-95 respirator fit-tested.
- If the suspect or confirmed case does not require hospitalization, s/he should be isolated from other inmates or staff members, including exclusion from events such as group meals, working out, etc. until s/he is proven to not be a case, or s/he has passed the time of infectivity [2 days before illness onset to 5 days after illness ons*et (this may be modified when more is known about the pandemic strain)*]. If the case shares a room with other inmates, arrangements should be made for the case to be given a private room (for example, to remain in health services in a private patient room). Arrangements should be made to provide the inmates with necessary daily items, including meals, water, and hygiene.
- The facility, with guidance from DHHS, will identify close contacts in the facility to a suspect or confirmed case of the ERI. Contacts are defined as those who spent >15 minutes within 3 feet of the case during his/her infectious period (2 days before illness onset to 5 days after illness onset). In the correctional facility setting, where contacts will be less clearly delineated, contacts are defined as those who meet the above definition or those who live in the same cellblock as the case.
- Staff and inmates who have had contact with suspected patients must register with health services and be screened daily for fever or respiratory symptoms
- With guidance from DHHS, recommendations will be made for quarantine of non-ill contacts. Guidance will be provided regarding details of quarantine, including cohorting of contacts, sites to use for quarantine, and legal authority. As with a case in isolation, arrangements should be made to provide those quarantined with necessary daily items, including meals, water, and hygiene.

D. Communication/Education

- Daily or more frequent updates to community members will be provided as determined by the Emergency Preparedness team.

Correctional Facility Pandemic Influenza Preparedness & Response Checklist

Level Ready-Green (ERI alert matrix)/Interpandemic period (WHO)

_____ Form an Emergency Preparedness team, if one does not already exist.

_____ Have Emergency Preparedness team members perform authority/legal preparedness activities

A. Access Control

_____ Develop a plan and a timeline for implementing a policy that enables controlling access to the institution.

_____ Develop a plan to close down or curtail campus transportation, including facility buses and shuttles if necessary.

B. Surveillance, Screening and Triage

_____ Have the institution's health services personnel screen all individuals at the time of registration at health services or nurse's office, following NH DHHS recommended precautions

_____ Provide patients who have a new cough with a surgical mask and/or tissues

_____ Document data at time of screening and review each week for analysis of trends

_____ Restrict individuals (staff and inmates) who have fever and a new cough from work, class, or any other group gathering

_____ Send any staff member home that is suspected of having a communicable disease that puts others in the institution at risk. Consult with NH DHHS re. appropriate isolation of inmates with suspected communicable disease.

_____ Report possible clusters to the State's Communicable Disease Control Section by calling (603) 271-4496 M-F 8AM-4:30 PM.

_____ Post informative infection control signs at building entrances and common areas

_____ Rotate the infection control signs periodically

_____ Monitor national, regional, and local data related to pandemic influenza

C. Infection control/Precautions

_____ Follow NH DHHS recommended precautions for contact with any individual who has a new cough and fever

_____ Provide mask or tissues to any inmates, staff or visitors who present with symptoms while at the facility

_____ Maintain adequate supplies of surgical masks, waterless hand rub, surface disinfectants, and tissues throughout public areas and meeting rooms

_____ Identify who should be N-95 (or other NIOSH-approved) respirator fit-tested personnel

_____ Maintain the appropriate number of trained and N-95 fit-tested staff

_____ Display hand-washing posters (can be downloaded from: http://www.dhhs.nh.gov) in high-traffic areas.

D. Communication/Education

_____ Develop a plan for communication and promotion of messages relating to ERI to internal and external audiences

_____ Develop a plan to orient and educate staff regarding basic readiness activities at the institution

_____ Identify translation services needs within facility population

_____ Identify behavioral health providers to incorporate into communication plans

E. Additional Preparedness Activities

_____ Implement vaccination campaign (offer vaccine on-site or provide references to area clinics, as applicable)

_____ Develop educational and promotional materials to promote availability and desirability of influenza vaccine for all

_____ If administering flu vaccine on-site, document administration of vaccine, preferably in a computerized database

_____ Have Emergency Preparedness Team designate an Incident Command core with 24/7 availability to respond to a potential outbreak

_____ Provide regular updates to staff and inmates

_____ Have Emergency Preparedness Team meet approximately once a month

_____ Monitor the Health Alert Network and other communications from public health officials and communicate changes to clinicians

Level Yellow-Orange (ERI plan)/Pandemic Alert Period (WHO)

_____ Continue applicable activities from Level Green/Interpandemic Period

A. Access Control

_____ Review possible need to restrict vendors, visitors, and group activities

B. Surveillance, Screening and Triage

_____ Consult with DHHS when suspect, after initial clinical evaluation, that a patient may have an ERI

_____ Register staff traveling to, or inmates who recently traveled to, designated high risk areas and report any symptoms of fever or cough that occur (monitor NH DHHS website for high risk areas, symptoms, and time period for surveillance)

_____ Register staff and inmates who have had contact with suspected patients and screen daily for fever or respiratory symptoms.

_____ Submit surveillance data electronically to NH DHHS daily using the form provided by DHHS (currently under development)

C. Infection Control/Precautions

_____ Expand precautions for clinicians to include airborne, droplet, and contact precautions for suspect cases with risk factors

_____ Follow droplet precautions for suspect cases with no risk factors

D. Communication/Education

_____ Place staff at high-traffic areas to answer questions and direct persons to health services as needed

_____ Keep the community informed and provide education about prevention and symptom surveillance

_____ Consider creating a designated phone line to campus health services

E. Additional Preparedness Activities

_____ Emergency Preparedness team should meet daily to review situation and strategies

Level Red (ERI plan)/Pandemic period (WHO)

_____ Continue applicable activities from Level Green/Interpandemic Period and Level Yellow-Orange/Pandemic Alert Period

A. Access Control

_____ Restrict access to the institution to staff and inmates

_____ Consider suspension of facility eateries, shops, and other group activities, including sporting events and classes, as determined by the Emergency Preparedness team in consultation with DHHS.

_____ Implement plan for delivering meals to inmates if cafeteria or group-style dining is closed

_____ Consider suspension of campus group transportation

B. Surveillance, Screening and Triage

_____ Screen those allowed into the facility for fever or cough and have their temperature taken – implement signage (sticker, card, stamp) system to track status

_____ Record the name and phone number/address of all persons seen with suspected ERI and reported to DHHS within 24 hours unless already alerted that need for notification to DHHS has ceased

C. Infection Control/Precautions

_____ Continue practice of airborne precautions, including staff who conduct screening at institution entrances

_____ Implement isolation & quarantine guidelines as they are made available by NH DHHS

_____ Isolate suspect or confirmed cases if they do not require hospitalization until proven to not be a case, or until passed the time of infectivity

_____ Assist DHHS with contact investigations

D. Communication/Education

_____ Provide daily or more frequent updates to community members and inmates

STATE OF NEW HAMPSHIRE
DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH SERVICES

29 HAZEN DRIVE, CONCORD, NH 03301-6504
603-271-4482 1-800-852-3345 Ext. 4482
Fax: 603-271-3850 TDD Access: 1-800-735-2964

John A. Stephen
Commissioner

Mary Ann Cooney
Director

Guidance for Child-Care Settings: Pandemic Influenza Preparedness & Response

I. Background

Influenza, commonly called "the flu," is caused by the influenza virus, which infects the respiratory tract (nose, throat, lungs). The flu usually spreads from person to person when an infected person coughs, sneezes, or talks and the virus is sent into the air. The flu can cause illness in all ages, and it is more likely than other viral respiratory infections, such as the common cold, to cause severe illness and life-threatening complications

Avian influenza, also known as "avian flu" or "bird flu," is caused by one of many viruses that exist naturally in wild birds. Wild birds usually do not become sick, but they can carry the virus and pass it on to non-wild birds, such as chickens, turkeys, and ducks (fowl), which can become very sick and die. Flu viruses can exist not only in birds, but also other animals. Bird flu viruses do not generally infect people. However, since 1997, there have been over 160 reported cases of human infection from avian influenza A H5N1 (the scientific name for a strain of bird flu currently circulating) in Asia and parts of Eastern Europe. Humans can become infected with bird flu through contact with infected poultry or contaminated fluids, such as the birds' saliva, nasal secretions, and feces.

Because all influenza viruses have the ability to change, scientists are concerned that viruses including but not limited to the influenza A H5N1 virus could change so that it can easily spread from sick people to otherwise healthy people. If this happens, and the virus spreads around the world, it would be called a pandemic. In previous pandemics, there was disproportionate illness and death in young, previously healthy adults. However, in a typical flu season, rates of infection are highest among children, and rates of serious illness and death from influenza are often highest among children aged <2 years. Though there is not yet confirmed person-to-person transmission of a pandemic strain of influenza, and though it is not yet known which age group(s) will be most affected by the next pandemic influenza, the State of New Hampshire Department of Health and Human Services (NH DHHS) recommends that institutions, such as child care programs, plan now for their response to pandemic influenza. The following recommendations address those infection control measures that may be useful in preventing further spread of the pandemic strain in a child-care setting.

II. Purpose

The purpose of this document is to assist child-care programs in their development of facility-specific pandemic influenza preparedness and response plans. This guidance is a fluid document that may be updated and edited as new information becomes available.

III. Recommendations for controlling pandemic influenza in the child-care setting:

Much of the following will depend on the specific characteristics of the pandemic strain of influenza, such as mode of transmission and length of infectiousness. There are various phases to any pandemic, which include preparedness, response, and then recovery phases. The following activities are recommended for the preparedness phase of a pandemic. Once a pandemic spreads to the State of New Hampshire (NH), Department of Health and Human Services (DHHS) may recommend a shift of infection control measures from individual, voluntary isolation & quarantine to community-based containment and social distancing. This may include the closure of institutions where individuals congregate in close settings, such as child-care programs.

Since the appropriate treatment of patients with any respiratory illness depends on accurate and prompt diagnosis, encourage parents and staff to discuss symptoms with their health care providers as soon as possible after symptoms begin.

Facility recommendations:

- Recommend all eligible staff and children of the appropriate age receive seasonal influenza vaccine.
    - The purpose in this recommendation is: to reduce illness from seasonal influenza transmission in vital workers if pandemic strain emerges; and to reduce diagnostic confusion if a pandemic strain emerges (one may have a higher suspicion for pandemic strain if the patient is known to have been vaccinated against seasonal influenza).
    - If your facility is not capable of offering the influenza vaccine on-site, refer staff and parents to local clinics or collaborate with community health organizations to hold clinics.
- Implement strict hand washing for all children and staff with soap and hot water; alternatively, alcohol-based hand gel may be used if hands aren't visibly soiled.
- Implement routine cleaning of toys and other objects that may become soiled by mouth and nasal secretions.
- Display DHHS hand washing posters. The posters can be downloaded from the Department's website at: http://www.dhhs.nh.gov .
- Maximize facility ventilation by opening windows and doors, if appropriate.
- Improve availability of tissues for management of nasal secretions.
- Consider sending educational materials, such as the Avian Influenza Fact Sheet, home with your students. This fact sheet can be found on the Department's website at: http://www.dhhs.nh.gov . Information for schools, child-care providers and parents can be found at CDC's website at: http://www.cdc.gov/flu/school/.

Staff-specific recommendations

- Ill staff should be sent home and should remain home until the end of communicable period of their illness. The particular time a staff member should stay home will be determined based on the characteristics of the circulating infectious agent.

- Staff sent home should not "moonlight" at other jobs during their illness.

- Because pandemic influenza is certain to cause administrative challenges due to staff illness and absenteeism, it may be useful to make plans ahead of time for accommodating staffing shortages.

As the pandemic elevates to an alert phase (current pandemic phase can be found at http://www.who.int/csr/disease/avian_influenza/pandemic/en/index.html; click on "Current WHO phase of pandemic alert"), staff should monitor any children who have traveled to high-risk areas for cough & fever until 10 days after their return. Staff should maintain a list of those children being monitored, and may consult with DHHS if illness is suspected.

Child-specific recommendations

- Children with cough and a fever greater than 100.4^{o}F should be restricted from the facility.

- Children who have symptoms that are clinically compatible with influenza (cough & fever; sore throat; headache; muscle aches) should be restricted from group activity and placed in a private room, if available, until s/he vacates the child-care setting. Any staff member caring for this patient should wear a surgical mask when within three feet of the child.

- As age appropriate, children should be educated regarding hand washing, covering the nose and mouth when coughing or sneezing, and the use and proper disposal of tissues.

- When a child reports feeling ill, the institution's staff (health services personnel, if applicable) will screen the child by asking the following question of the child or the child's guardian: "Do you have a new cough that has developed over the last 10 days?" For younger children, personnel may observe for cough.

The NH Communicable Disease Control Section staff is always available for consultation and assistance in controlling influenza and other respiratory illness outbreaks. Please report any increase in cases of respiratory or influenza-like illness; our staff will help provide recommendations for control measures for your facility. During regular business hours, we can be reached at 603-271-4496, or at 1-800-852-3345, extension 4496. After hours or on weekends, please call the State switchboard at 1-800-852-3345 and request the Public Health Nurse on call.